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NOVEMBER COVER

The cover picture shows one of the lounges of Burford Hall, new residence hall for women students. The dormitory was opened in September, 1959 and was formally dedicated, October 18, 1959.

- Courtesy of Audio-Visual Center.

Editorial . . .

A Better Way

Frequently, it is stated that teachers tend to teach by methods that they have observed, or that they copy the techniques of former teachers whom they considered master teachers. It has also been stated that we in the teaching profession are so bound by custom and tradition that we tend to make teaching a routine—our day to day instructional activities are so static that we give no consideration to the group, the topic at hand, or to the technique employed. In any case, it goes without saying, that many teachers assume that they are effective simply because they perform the act of teaching.

A teacher who continually follows a teaching method that he has seen, or one that he has experienced, or one that he has heard about, is taking a great deal for granted when he assumes that his teaching is effective. Research has shown consistently that there is no one best method of teaching. A technique that shows considerable promise in one instance, does not hold up in a second situation. A method may be effective one day and yet fail miserably the next. An instructional plan that seems efficient with one group, does not show the same efficiency with another group.

The teacher, then, should not be content to use methods which he thought were good for him or ones which he thought someone else used effectively. He should face the issue with a research mind-set involving

systematic and scientific procedures in order to find a better way to teach. The action research approach, in which the researcher attempts to improve the situation in the classroom, hold great promise for improved day-by-day methods. If the teacher carefully analyzes his class—the interests, the needs, the abilities, etc.—, he will have a better basis for planning and performing his instruction. If he carefully considers his subject—the objectives, the goals, the values, etc.—, he can organize his procedures and materials in a more meaningful manner. If he is willing to try different procedures and techniques and evaluate the results, he will be able to adapt his instruction to his class in a greatly improved manner. Although the outcomes of such activities may not be easily measured, they hold the potential, at least, for arousing greater interest on the part of the teacher and will help him maintain a higher enthusiasm in his work. A static, routine approach to teaching does little or nothing to motivate the learner.

In this our annual research issue, we present reports of research undertaken by teachers and students. It is our hope that more and more teachers will become research minded in order that, for teaching, the ultimate outcome will be a better way.

Charles Hardaway,
Editor

The Effects of a Participation Program on the Attitudes of Prospective Teachers at Indiana State Teachers College

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Indiana State Teachers College*

Summary of an Advanced Thesis Presented to the Faculty of the Education Department, Indiana State Teachers College, in partial fulfillment of the requirements for the Advanced Degree in Education.

Administrators and others in teacher education are taking a critical look at the role of college-controlled laboratory schools in teacher education. Some laboratory schools, such as at Indiana State Teachers College, are constructed and staffed with highly qualified personnel to strengthen and facilitate the translation of theory into practice in the pre-service and in-service education of teachers and to provide an atmosphere for experimentation for the faculty and the profession. Some schools that were concerned chiefly with student teaching a few years ago are now working principally in pre-student teaching laboratory experiences.

A major influence in creating expanding demands on the laboratory school was the development of Standard VI of the American Association of Colleges for Teacher Education. This Standard stressed the broader concept of professional laboratory experiences in the volume, *School and Community Laboratory Experiences in Teacher Education*.¹ Emphasis was given to professional laboratory experiences preceding and following student teaching, to off-campus student teaching, to laboratory school

functions other than student teaching, to directed observation and participation as inherent aspects of professional courses, and to all-college participation in the development of professional laboratory experiences for students.

It is important that the student be prepared for experiences in observations or participation. The activities he observes or in which he participates must be reviewed and evaluated to insure that they contribute to his growth. Also, the nature of the observation or participation and the student's effectiveness in observation or participation must be carefully reviewed and evaluated.

A coordination committee composed of laboratory school staff members and representatives from college departments could become a strong developmental force in achieving greater integration between professional laboratory experiences and other aspects of the teacher education program. However, the total teacher education faculty needs to become involved in considering the values which might possibly accrue from professional laboratory experiences as vital parts of their courses. Several points must be considered, such as types of experiences they would like to have made available in the laboratory school, ways that these experiences can help most, and evaluation of the contribution to student growth in their courses. As the faculty becomes involved, procedures should be worked out whereby records of student experiences may be accumulated and made available to teachers of college courses, laboratory school personnel and off-campus supervising teachers.

It is essential that the whole faculty become involved because usually professional laboratory experiences do not exist in isolation. With the possible exception of student teaching, they exist as inherent parts of courses of the various departments.

Fundamentally, educational leaders are faced with the problem of bridging the gap between theory and practice. The college must have a place where theory can be seen in operation and where participation in learning activities occurs. Public demands for a better educational program in American schools indicate that the time has come for all colleges preparing teachers to accept the challenge and relate theory to practice.

It was with these thoughts in mind that the writer undertook this task of determining the extent to which participation in the Laboratory School changes the attitudes of prospective teachers toward children and the profession.

The data for this study were obtained through the administration of the Minnesota Teacher Attitude Inventory three times to students who were enrolled in Psychology 202, Human Growth and Development, during the Winter Term of the school year 1958-1959, at Indiana State Teachers College. The first time the Inventory was administered, 231 students were present; the second time, there were 222 students present; and the last time there were 228 students present. Statistical analysis was utilized to determine any differences and their significance.

In addition, a questionnaire was administered to the 218 students who were present on the days the ques-

¹Subcommittee of the Standards and Surveys Committee of the American Association of Teachers Colleges, *School and Community Laboratory Experiences in Teacher Education* (Lock Haven, Penn.: American Association of Teachers Colleges, 1948).

tionnaire was given, and who had participated.

Perhaps the prime limitation of this study was the lack of a control group (wholly non-participating) at either the elementary or secondary level. By allowing all the students to participate, it proved difficult to determine to what extent the participating experience influenced attitudes and to what extent the professional course affected it. However, by measuring growth during the middle of the term, a reasonably accurate picture of the participation program was obtained.

Another limitation of the study was the use of only one instrument to measure attitudes.

In reviewing related research in the area of participation, the writer found no research which parallels this work, however, a bibliography is included which lists certain references with implications for this study.

In this study, conducted at Indiana State Teachers College, there were 232 students involved. They were divided into five groups, taught by five different college professors. There was no attempt to group the students in any manner whatsoever for class placement.

Since the participation was to be at the Laboratory School, it must be pointed out that prior to the Winter Term of the school year 1958-1959, the principal of the Laboratory School and the faculty of that school had indicated their willingness to engage in a program whereby the students in Psychology 202 would be assigned to a teacher in the Laboratory School for a period of two weeks each. During this two-week period, the students would report to the teacher assigned for one hour each day, making a total of ten hours for the two weeks. During this period, the participant would engage in various activities with the students and also in whatever classroom routine the teacher assigned.

The students were required to keep a log of their activities and at the end

of their participation period, they evaluated their experiences for the benefit of the college professor and the Laboratory School teacher.

There was, then, a wide variety of experiences engaged in and a great difference in the amount of actual pupil contact which the various students encountered.

During the first week of the term, on January 8 and 9, the college professors administered the Minnesota Teacher Attitude Inventory to those students present. At the time of the first administration, there were 175 secondary majors present and 56 elementary majors.

Four weeks later, on February 6 to February 9, the same instrument was administered again. At this time, the students were asked to indicate on their forms whether or not they had participated during the preceding period. There were 52 elementary majors present at this testing, of whom 38 had participated and 14 had not; and 170 secondary majors of whom 71 had participated and 99 had not yet done so.

The final administration of the instrument was made during the week of March 16, at the end of the term. At that time, 52 elementary majors were present, all of whom had participated; and 174 secondary majors, of whom 156 had participated.

At each of the administrations of the Inventory, the students were assured their scores would in no way influence their final grade. The response sheets were machine scored.

In addition to the Inventory, a questionnaire was prepared and administered to the students by the writer. This questionnaire was used on March 18, 19 and 20 with the various sections. At the time the questionnaire was given, 56 elementary majors and 162 secondary majors were present who had participated in this program.

Reviewing the data presented in this study, as obtained by the Attitude Inventory and the questionnaire,

it was revealed that the greatest gain for the elementary people was between Test I and Test II, where the gain was highly significant. It is apparent that a steady and consistent gain in attitudes was realized by the elementary group as a whole between Test I, Test II, and Test III.

The secondary people as a group made steady and consistent gains in attitudes throughout the term, with slightly more significant gains being made between Test I and Test II.

In noting the differences in scores between Test I and Test II, there seems to be little difference in the gains made by the participants and the non-participants at the elementary level. Both groups did make highly significant gains.

Secondary participants and non-participants made significant gains between Test I and Test II. However, on the basis of percentile equivalents, the elementary people made the greater gains between Test I and Test II.

At the secondary level, highly significant gains were made by both early participants and late participants at Test III.

The elementary people who participated between Test I and Test II made a gain in mean raw score, whereas those who did not participate lost points in mean raw score. Participation seems to have had a beneficial effect on attitudes, at this time.

The questionnaire was administered to 218 students, of whom 56 were elementary and 162 secondary. On the basis of the questionnaire, the following findings were noted:

1. Of the elementary people, 76.79 per cent were of the opinion that participation had been an experience of great value to them; 23.21 per cent felt it had been of moderate value. Thus, 100 per cent of the elementary people felt that participation had been of great or moderate value.

2. Of the secondary people, 67.90 per cent believed that the participation experience had been of great

value to them; 31.48 per cent believed it had been of moderate value and only 1 person, less than 1 per cent, felt it had been of little value.

3. When asked to what extent participation had enabled them to understand children better, 37.50 per cent of the elementary people were of the opinion that it had helped them to a great extent and 62.50 per cent felt it had helped them to a moderate extent. This represents 100 per cent of the elementary people.

4. When the secondary people were asked to what extent participation had enabled them to understand children better, 26.54 per cent felt that it had helped them to a great extent, and 69.14 per cent felt it had helped them to a moderate extent. Only 7 secondary people, 4.32 per cent, felt they had been helped only to a slight extent.

5. When asked if participation had made their class in Human Growth and Development more meaningful, 60.71 per cent of the elementary people felt it had to a great extent and 37.50 per cent felt that it had helped to a moderate extent. Only 1 elementary person, 1.79 per cent felt it had assisted him only slightly.

6. Of the secondary people, 41.36 per cent felt that participation had made their classwork more meaningful to a great extent, 50.62 per cent felt it had helped to a moderate extent, and 8.02 per cent felt it had helped to a slight extent.

7. When asked to what extent their classwork had made participation more meaningful, 48.21 per cent of the elementary people felt it had helped them to a great extent and 50.00 per cent to a moderate extent.

8. Of the secondary people, 50.31 per cent felt that their class in Human Growth and Development had made their participation experience more meaningful to a great extent; 37.27 per cent to a moderate extent; and 11.80 per cent to a slight extent.

9. Of the elementary people, 85.71 per cent were of the opinion that par-

ticipation had strengthened their desire to teach; 10.71 per cent felt it was unchanged and 3.58 per cent (2 people) felt the experience had created some doubt.

10. Among the secondary people, 59.88 per cent felt that participation had strengthened their desire to teach, 33.33 per cent felt it had left them unchanged; 6.17 per cent felt it had created some doubt; and one person felt that the experience had made him decide not to teach.

11. Among the elementary people, 71.43 per cent felt that participation should be for a longer time and 28.57 per cent felt it should be left unchanged; while 52.17 per cent of the secondary people were of the opinion that the experience should be for a longer time while 47.21 per cent believed it should be kept at 10 hours.

12. The comments of the elementary people indicated a need for more conference time with the supervising teacher and for more actual work with the children.

13. The comments of the secondary people indicated a need for more participation and less observation; for more conference time with the supervising teacher; and for secondary people to participate in their own field.

From the analysis of data in this study, the following conclusions were drawn:

1. Because of the small number of late participants at the elementary level, 14, no conclusions can be drawn as to the relative value of early or late participation.

2. Among the secondary people, the time of participation seems to have had little effect on attitudes.

3. On the basis of the statistical data, no conclusion as to the relative value of the course or the participation experience can be made.

4. On the basis of the questionnaire data, Psychology 202 and the participation experience seem to reinforce each other.

5. One concludes that students' at-

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itudes toward teaching are more likely to be unchanged or strengthened than weakened or changed in negative direction by the participation experience. However, there is evidence to indicate that the participation experience may serve to influence a decision on the part of some pupils not to teach. (2 elementary and 10 secondary became doubtful and one secondary decided not to teach.) Any procedure which will aid in the screening process and prevent a prolonging of professional education for those not desiring to continue in teaching is worthy of utilization.

6. Although the data of this study do not indicate an advantage for participants over non-participants or

for early participation over late participation, the questionnaire results indicate that the participants themselves believe that the program was worthwhile and beneficial.

7. Although no conclusion may be drawn from the data of this study as to the relative value of the course and the participation experience, consistent gains were made by both elementary and secondary people during the term, indicating that together, Psychology 202 and the participation experience result in beneficial changes in attitudes.

On the basis of the study and the conclusions reached, it is believed by the writer that no recommenda-

tions *per se* from the statistical treatment of the Minnesota Teacher Attitude Inventory can be made.

However, from the information shown as a result of the questionnaire, in which the participants themselves evaluated the program, it is the recommendation of the writer that the participation program be continued.

Further study with different devices should be made of the effect of participation on attitudes of prospective teachers.

Thesis Committee:

Dr. Jacob E. Cobb, Chairman
Dr. Charles Hardaway
Dr. Edgar M. Tanruther

An Analysis of the Grade Expectancies and the Actual Achievements of Fourth, Fifth, and Sixth Grade Pupils

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(Summary of an Advanced Thesis presented to the Faculty of the Education Department, Indiana State Teachers College, in partial fulfillment of the requirements for the Advanced Degree in Education)

Pupil evaluation has too often been a matter of comparing a child's academic achievement with his grade placement. Such evaluative procedure is not consistent with modern educational philosophy directed toward meeting individual needs. Evaluation can be individualized only when standards for achievement are individualized. This study shows how a total group picture can be produced through analysis of the abilities and achievements of the individuals within the group.

I. THE PROBLEM AND METHOD OF PROCEDURE

In April, 1959, one hundred seventy-five fourth, fifth, and sixth grade pupils in a selected laboratory school were given intelligence tests, from

which grade expectancy scores were derived, and achievement tests, from which grade equivalent scores were derived. The achievement areas considered were reading, language arts, arithmetic, and the composite average achievement for the three areas. The data gathered from the test scores were analyzed and interpreted and provide the bases for the study.

The purpose of the study was to (1) determine the grade expectancy for each pupil in the test group; (2) to compare the grade expectancy with actual grade achievement in reading, language arts, arithmetic, and average achievement; and (3) to investigate the extent to which broken homes, school transfers, and previous retentions contribute to serious underachievement.

For this study, any child who did not live with both his own mother and his own father was considered to be from a broken home; any child who had ever failed to gain a promotion was considered to be a retention

student; any child who had ever attended any school other than the laboratory school in which the testing was done was considered to be a transfer student.

In order to test both intelligence and achievement, it was necessary to use two types of standardized tests with each pupil. The decision about the instrument to be utilized in the achievement testing was not made in connection with this particular study. Each April, this laboratory school gives the Science Research Associates (SRA) Achievement Series, Form A to grades two through nine.

The choice of instrument measuring ability was made as a part of this study and five principal considerations went into the selection of the SRA Test of General Ability. First, the test is new and, at the time of testing, not on the market; therefore, no examinee could possibly have been in any school situation where he had become acquainted with the test. Second, the test was prepared

by John C. Flanagan who is Director of the American Institute for Research and enjoys high respect in the field of testing. Third, it is one of the few intelligence tests which provide both an intelligence quotient and a grade expectancy score. Fourth, the norms for the test have been equated to the norms of the SRA Achievement Series. Finally, and a very potent factor in the selection, the test is completely pictorial and requires no reading ability.

Where test cases fell six months or more below their expectancies in reading, language arts, arithmetic, or average achievement, they were treated as underachievers. For purposes of this investigation, broken homes, retentions, and school transfer were the possible causes of underachievement considered.

II. SUMMARY AND CONCLUSIONS

In all areas of underachievement, the majority of cases are boys and the proportion is much greater than in the matter of enrollment. The lack of achievement is not concentrated in any one area nor in any one grade group. All grade groups have wide ranges of expectancy. The fourth grade expectancies range from second grade second month to eighth grade ninth month. The fifth grade expectancies range from second grade seventh month to ninth grade fifth month. The sixth grade expectancies range from second grade fourth month to ninth grade fifth month. All grade groups had wide ranges of achievement. However, only in fifth grade reading and in sixth grade reading and language arts did the highest actual achievement surpass the highest expectancy. The narrowest range of achievement is in arithmetic at all three grade levels.

For the pupils included in this study, the three possible causes of underachievement which were investigated appear more frequently among the normal or above average achievers than among the underachievers in almost all instances. In the few instances where this is not the case, the

percentage differences are slight and not considered significant.

From data contained in this study, it can be concluded that children may achieve in advance of their actual grade placement and still be serious underachievers. Therefore, a teacher must learn to look beyond the grade level attained on achievement tests.

The amount of underachievement cannot be used as the basis for organizing instructional groups since the underachievement is in terms of individual, and not group, expectancy.

The lowest score in any group may not indicate underachievement no matter how far it deviates from the actual grade placement of the pupil.

The child who achieves the highest score or the highest class rank may be a serious underachiever. For this reason, class comparisons should not be relied upon for final assessment of pupil achievement.

The wide range of expectancies and achievements in all grade groups makes it imperative that instruction and instructional materials also cover a wide range, if individual needs are to be met.

Intelligence quotients, in and of themselves, are inadequate indicators of expectancy. A child's mental age needs to be considered in the determination of his own individual standards for achievement.

Underachievement in any single curricular area does not necessarily preclude underachievement in other areas. For this reason, organization of instructional groups should be flexible from area to area.

The wide range of grade levels of achievement within all of the grade groups renders non-promotion on the basis of grade placement standards indefensible.

Average achievement presents an incomplete picture in many cases. High achievement in one area may counterbalance low achievement in another and make pupils appear to be attaining acceptable average achievement.

In the cases reported by this study, broken homes bear no consistent relationship to academic achievement or underachievement.

The underachievement reported by this study was not caused by retention and the arithmetic achievement may have been improved by retention.

Contrary to popular thought, pupils included in this study who had attended one or more other schools were not adversely affected by such transfer.

III. RECOMMENDATIONS FOR FURTHER RESEARCH

Since the possible causes of underachievement considered by this study have been shown to be inadequate explanations of under achievement, further investigation needs to be made. Perhaps, the fact that pupils do not achieve at the same level in all areas is an indication that greater or lesser interest exists from one area to another. If such were proven to be the case, then curricular revision might be undertaken on that basis.

Cases who deviated very greatly from expectancy in all of the achievement areas need to be given additional consideration. It is possible that scores for these pupils, used in this study, are not representative.

It might prove worthwhile to make a careful study of the item content in the achievement series used. It may be that the content is not valid for measuring the curriculum of the pupils in this group.

Information contained in the report might be utilized in identifying potential drop-outs. There is such a large number of boys failing to achieve successfully that age may be the only reason some of them stay in school now. If they could be indentified while they are in the intermediate grades, perhaps the school could increase its holding power.

Thesis Committee

Dr. J. E. Cobb, Chairman

Dr. Carlos Watson

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A Study of the Background of Beginning Students of Mathematics at Indiana State Teachers College

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Indiana State Teachers College*

This report was a project in the Course, Education 517, Fall, 1958, under the direction of Miss Helen Ederle, Associate Professor of Education, Indiana State Teachers College.

In the normal process of teaching and in the annual enrollment of freshmen into college, one encounters many problems. Many of these difficulties could be lessened or eliminated by improved guidance. By making use of all the data available on each individual student, better counseling would be possible.

As more and more high school graduates enter college, there is an accompanying increase in the number of students entering the study of mathematics. This creates the problems of crowded facilities, larger classes, and providing for the varying needs and abilities of the students. It therefore seems advisable to investigate the various aspects of the mathematics student's background in order to discover his general characteristics. This should enable the college counselor to better counsel with the incoming student. The purpose of this study, therefore, was to determine the general characteristics of a sampling of students who have chosen to pursue the study of mathematics at Indiana State Teachers College.

Methods of procedure and sources of data. The data presented in this report were gathered from one hundred four freshman mathematics students who enrolled in the Fall Quarter of 1958 at Indiana State Teachers College. Data were obtained from four sources. The first of these sources was the high school

transcript; second, the orientation test scores as provided by the Division of Research and Testing at Indiana State Teachers College; third, a questionnaire prepared by the author and completed by all the student's involved except the author's counselees, who were asked the same questions in personal interviews; and fourth, the autobiographical data provided by the students in their application for admission forms. It was felt that the data utilized were pertinent and accessible, but were not necessarily considered exhaustive relative to the study of the subject. Basic factors included were as follows: (a) the student's family background as it might pertain to his starting the study of mathematics, (b) his most difficult mathematics course in high school, (c) his expected achievement in the field as revealed by psychological tests, (d) his preparation for his college career, and (e) his original interest in mathematics.

Presentation of Data

Biographical data. It seemed logical to begin this report with a consideration of the family background. This was made possible from the biographical data furnished by the students. It might be noteworthy to state here that nine of the fathers and six of the mothers of the students included in the study are deceased.

With a single exception the loss has been only one parent. A tabulation of the formal education of the students' parents is presented in Table I. The data reveal that 83 per cent of the parents have at most a high school diploma with a major part of them having even less. An analysis of the education of the other members of the family showed that 76 per cent of the student have no relative who graduated from college. This indicates that many of the students are the first of the family to attend college. There may be many underlying reasons for this. The parents may be pressuring the student to better himself through education. The student may feel a need to improve his social and financial levels, which may be evident from a study of the father's occupation. Most of the students plan careers that are not similar to those of their fathers. A tabulation of the occupations of the fathers is given in Table II. Comparing these data with the students' responses to the questionnaire (regarding career choices), page 25, illustrates this probability. The data in Table II also correspond to the formal education of the father. When these figures are coupled with the facts that fourteen of the students are an only child in the family and four are from families of eight children, with the remainder somewhere between these two extremes, the bio-

Table I. Formal Education of Parents of Mathematics Students at I. S. T. C.

Formal Education	Father		Mother	
	No.	Per Cent	No.	Per Cent
College graduate	5	4.81	3	2.88
High School graduate	12	11.54	15	14.42
Less than high school graduate	42	40.38	53	50.96
Attended college (not graduate)	45	43.27	33	31.73
Total	104	100.00	104	99.99

graphical background for the students in the study is established.

Table II. Occupation of Fathers of Mathematics Students at I. S. T. C.

Occupation of Father	No.	Per Cent
Profession	8	7.69
Supervisor	7	6.73
Skilled Labor	31	29.81
Farmer	15	14.42
Miner	5	4.81
Laborer	25	24.04
Self-Employed	3	2.88
Other	10	9.61

Scholastic data. The next phase of the study covers the scholastic background of the mathematics students. This is of interest for two reasons. First, counselors should know how well the students are prepared; and second, counselors are concerned with the time when the student began this preparation. Rather than consider the grade obtained in the high school course work, it seems more accurate to study the amount of preparation. Preparation in both mathematics and science is considered since there is a very close relationship between the two areas. The tabulation of semesters of work in these two fields is given in Table III. It is seen in Table III that approximately 90 per cent of the mathematics students completed five or more semesters of mathematics in high school and that about 80 per cent completed four or more semesters of science in high school. After considering the special preparation of the students in high school, the question arises as to how well they compare with their fellow students

Table III. Semesters of Mathematics and Science Taken by Students in High School

Number of Semesters	Mathematics		Science	
	No.	Per Cent	No.	Per Cent
Two	1	.96	1	20.19
Three	2	1.92	2	1.92
Four	10	9.62	31	29.81
Five	11	10.58	10	9.62
Six	23	22.12	33	31.73
Seven	18	17.31	2	1.92
Eight	28	26.92	5	4.81
Nine	8	7.69		
Ten	3	2.88		
Total	104	100.00	104	100.00

in other fields. The validity of class rank as a measuring device may be questioned, but for the completeness of the study it is presented in Table IV.

Table IV. Class Rank of Mathematics Students

Class Rank in high school	No.	Per cent
Upper ten per cent	12	11.5
Upper twenty-five per cent	38	36.5
Upper fifty per cent	69	66.3
Lower fifty per cent	35	33.7

As was stated previously, the fields of mathematics and science are closely related, and therefore require somewhat the same or similar aptitudes. In addition to the specialized preparation one should also consider what other subject matter fields were of major interest to the student in high school. A tabulation of the students' other major areas in high school is given in Table V. Although considerable variation is found in the students' choices, it does add to the overall picture.

Table V. Other Major Fields of Interest of the Mathematics Students.

Other Major Fields of Interest	No.	Per cent
Industrial Education	25	24.04
Social Studies	22	21.15
Commerce	13	12.50
Music	8	7.69
Languages	8	7.69
Agricultures	6	5.77
None	22	21.15
Total	104	99.99

Questionnaire results. In order to obtain the student's own personal ideas concerning his choice of mathematics as his major field of study,

the writer prepared a questionnaire which was completed by the students involved in the study. The writer's counselees responded to the questions in a personal interview, however, rather than on the questionnaire form. The results of the questionnaire data were as follows:

When did you become interested in mathematics?

	No.	Per cent
Junior high school	28	26.92
High School:		
Freshman	27	25.96
Sophomore	27	25.96
Junior	9	8.65
Senior	8	7.69
Undecided	5	4.81

Why did you decide to begin the study of mathematics?

	No.	Per cent
Necessity for further study	34	32.69
Better preparation for service	4	3.85
Enjoyment of mathematics	21	20.19
Opportunities in mathematics	5	4.81
Desire to become mathematics teacher	40	38.46

What subject was the most difficult for you?

	No.	Per cent
Algebra	18	17.31
Plane Geometry	40	38.46
Solid Geometry	11	10.58
Trigonometry	19	18.27
None	16	15.38

What single topic in mathematics has been the most difficult for you?

	No.	Per cent
Geometric proofs	20	19.23
Logarithms	13	12.50
Trigonometric identities	8	7.69
Factoring	12	11.54
Radicals	11	10.58
Miscellaneous	40	38.46

What course in mathematics was the easiest for you?

	No.	Per cent
Plane Geometry	26	25.00
Algebra	50	48.08
Trigonometry	11	10.58
General mathematics	17	16.35

What other subject matter area is of major interest to you?

	No.	Per cent
Science	50	48.08
Industrial Education	12	11.54
Commerce	10	9.61
Languages	9	8.65
Physical Education	9	8.65
Social Studies	13	12.50
Dramatics	1	.96

How far do you intend to pursue the study of mathematics?

Bachelor of Science	36	34.62
Master of Science	11	10.58
Advanced Graduate	16	15.38
Doctorate degree	2	1.92
As far as possible	15	14.42
Undecided	24	23.08

The questionnaire data reveal several interesting and pertinent factors relative to the background of the mathematics' students studied. Over three-fourths became interested in mathematics early in high school or before, and the majority felt a need for mathematics for personal betterment in relation to their occupational goals. Plane geometry was the most difficult subject for the respondents in high school, whereas algebra was the easiest subject for the group. A variety of topics was apparently difficult for the group with no single topic presenting excessive difficulty. In general, the other areas of interest of the group are closely allied with mathematics, and the students intend to pursue mathematics throughout college and beyond the bachelor's degree.

Predictive data. In order that there might be some basis for a prediction of student success in mathematics, the writer tabulated the individual student's scores on the Quantitative section of the ACE Psychological examination which indicates aptitude in mathematics and science; the science section of the Iowa Test of Educational Development, and the total percentiles on the ACE Psychological examination. The Quantitative section of the ACE test and the Science section of the Iowa test are considered valid and reliable bases for predicting student success in mathematics. The tabulation of the percentiles of the mathematics students is presented in Table VI.

The test data presented in Table VI would tend to show that the mathematics students will probably be successful in college mathematics. Nearly 55 per cent exceeded the 70th percentile on the quantitative section

Table VI. Distribution of Percentile Ranks of the Mathematics Students on Various Psychological tests

Percentile	Quantitative Section, ACE	Science I.T.E.D.	Total ACE
95	8	9	3
90	20	27	16
80	19	38	7
70	11	17	15
60	10	5	14
50	14	3	11
40	9	2	15
30	7	2	10
20	5	1	6
10	3	0	7

of the ACE test, whereas nearly 23 per cent fell below the 50th percentile on this test. Nearly 88 per cent of the group exceeded the 70th percentile on the science section of the Iowa test, and only 5 per cent were below the 50th percentile. Thirty-nine per cent of the group were above the 70th percentile on the total ACE test; however, 37 per cent were below the 50th percentile on this test.

Summary and Conclusion

The data collected on the education of the parents and families of the students included in the study reveal that approximately 85 per cent of the parents have at most high school diplomas. Approximately 75 per cent of the students have no relative with a college degree. All but one of the students have at least one parent living, with the major portion having both parents living. The data on the occupation of the fathers indicate that 92 per cent of them are working at jobs that require little or no college training.

The data on the scholastic preparation for college show that the students have had an average of 6.7 semesters of mathematics and 4.5 semesters of science in high school. Thirty-nine of the 104 students have had 8 or more semesters of mathematics. Thirty-eight of the students graduated in the top one fourth of their high school class. The choice of a second and third field of interest shows science the most frequently named, with industrial education and social studies following in that order.

The questionnaire data revealed that the major portion of the students became interested in mathematics during the first and second years of high school, although a large percentage had made the decision during junior high school. A slight majority of the students decided to begin the study of mathematics because of its necessity for further studies. Plane geometry appears to be the course that was most difficult for them, whereas algebra was the easiest. The students' choices of the most difficult topic was varied with a slight majority giving geometric proofs as their choice. Approximately one-third of the students stated that they intended to obtain a Bachelor of Science degree in mathematics; about one-fourth were undecided as to how far they intend to pursue the study of mathematics. Test data relative to success in mathematics revealed that the large majority possessed academic potential for success in mathematics.

There are at least three important conclusions that can be drawn from the data derived from this study. The most important of these is the apparent factor that these students are not "crash program" mathematics students. They decided on a mathematics program early in high school. A major part of the students have very definite ideas about why they started the study of mathematics. The major portion aspire to become mathematics teachers. Second only to this goal is the necessity of having mathematics for future careers. These objectives are not of recent origin. The mathematical prepara-

tion of the students indicates that this preparation started considerably before the so-called "Sputnik" scare. A second conclusion can be based on the data showing lack of college training in the families of the students. This, coupled with the occupational status of the father, indi-

cates an attempt by the students to better themselves financially and socially. The third conclusion is based on the test results which indicate that a major portion of the students have the apparent aptitudes to succeed in the field of mathematics. It would seem, however, that too many

students do not have this ability, or at least will have an extremely difficult task doing the required work. Better guidance practices at the high school level could alleviate some part of this.

Introduction of Foreign Language at the Elementary Level in the Laboratory School, Indiana State Teachers College

Jane Gwin, *Senior,*
Indiana State Teachers College

As we in the United States begin to take a good look at our educational system, we find that the area of foreign languages is one in which much expansion is needed.

Realizing this, Indiana State Teachers College, this last fall, established its first elementary foreign language program in the Laboratory School. The aims of the program were to give the students the ability to speak the language, to comprehend it, to read it, and to write it.

The program was set up in cooperation with Dr. Harley Lautenschlager, Principal of the Laboratory School, and under the supervision and guidance of Mrs. Mary Olga Peters, Chairman of the Foreign Language Department of Indiana State Teachers College. The efforts of Dr. Ruth Runke, Professor of Education, were also instrumental in initiating this program. The writer was selected to do the classroom instruction.

Miss Mary Jane John and Mr. Charles Syester, sixth-grade teachers, chose eighteen students on the basis of high I.Q. and interest in the program for the first class. The class was taught for one-half hour, three days a week. The aural-oral method was used, and from the very beginning, the children were encouraged to use

as little English as possible. The purpose of this report is to describe the activities of this first foreign language class for elementary pupils in the Laboratory school, and to present a partial evaluation of the program.

The first day of class, the children were asked if they knew any Spanish words. It was surprising to learn how many they had come in contact with by means of television, movies, records, and library and text books. They were eager to show how many they knew.

After a brief introduction to the language and the program, the children were taught greetings and the equivalents of their English names. From this time on, they lost their identity as English speaking sixth-graders and became Spanish students. They happily refused to respond when called by their English names, but proudly replied upon hearing their Spanish ones. Roll call was taken in Spanish. Soon they were asking their teacher how to say the names of their families and friends.

As the children learned the greetings and their names, they were instructed to select a partner. With this partner, each child went before

the class and pretended to meet his friend on the street. As they met, they exchanged greetings and soon had learned enough other words that they could carry on a short conversation before bidding their friend "adios" or "hasta lavista." We found that the children responded naturally and freely in "real" situations such as this one, and thus created circumstances in which they could pretend.

Animals and members of the family were introduced next by means of pictures. No English was used. When introducing a puppy to them, for example, a picture was held up, and the teacher said, "Es el perrito." This was repeated several times and the children repeated it four times. The children had then heard the phrase about seven times and were able to use it. Next, they were asked, "Es el perrito?" Immediately hands were raised. When a child was called upon, he answered, "Si, senorita, es el perrito." They were instructed to always use complete sentences. A mere "si" or "no" was regarded as an error equally as bad as the use of English. The children learned the animals and family quickly. The stack of pictures they recognized soon was of considerable size. At this time, they learned the expression "Quien es?"

or "What is this?" Another game was introduced. A child would go before the class and select a picture which he showed to the class. He would ask, "Quien es?" The children guessed. The child before the class answered that the guess was right or wrong, and when a correct answer was given, he held up another picture. Every child had an opportunity to go before the class, and to keep the game moving, only three pictures were shown by each child. This proved to be one of our most popular games, for the children loved "to be the teacher."

All children are known for their thoughtfulness, and these were no exceptions. At Christmas, they made cards in Spanish which were sent to relatives and friends. The class also had a party. A pinata was used in complying with our efforts to keep it as much like a Spanish party as possible. The children sang carols in Spanish and played games they had learned in class. They were especially proud of the fact that no English could be used. The conversations were simple, but Spanish.

After almost a semester of instruction, we felt quite familiar with the children and their learning abilities. For example, they could learn about eight new words each class day and remember them well enough to use at our next meeting. They seemed to learn very quickly and could master more words during a class period, but they became confused if they were given too many words to remember.

Pictures, posters, records, and other aids proved to be very valuable with this age group. As a new unit was introduced, games, songs, or other activities were taught to help the children use the new vocabulary. "Ten Little Indians" and number games were used for drill with numbers. Sometimes the activity was an adaptation of a similar English one. Other times, the activity was peculiar to Spanish, and still other times, it was merely made up by the teacher or the students. Music was especially popular, and records of Spanish songs were used. Records also aided the

learning of everyday conversations. The "Spanish For Children" series by Ottenheimer Publishers was used about once a week. This is a well-planned series which enables the child to learn quickly with no outside drill, but since we did not have a great deal of time and since facilities for using the record were not always available, we attempted to fit the record conversations into our regular lesson. Thus the children became more familiar with them. The children were often asked questions about the lesson they heard on the record. This proved to be effective in two ways, for it made the children eager to hear the record again and also made them better listeners when the record was used.

Although this was primarily a conversation class, some stress was also placed upon grammar. The children learned the sentence structures through repetition rather than exercises. They were taught to distinguish between singular and plural forms, the importance of the agreement of subject and verb and noun and article, and the difference between masculine and feminine forms, but they were not required to learn complete

conjugations of every verb they encountered.

After Christmas vacation, the reading-writing program was begun. With the exception of Christmas greetings and words to songs, the children had seen no printed or written Spanish. This was done in order that they could become familiar with the Spanish pronunciation before they saw the printed word. Next, the children were taught the vowels and the consonants that are very different from English. An example of the latter would be the "ll" which has the sound of ly or y. They were not taught the complete alphabet. They quickly "sounded out" a word as it was written on the board, and with little further preparation, began to read. Few mistakes were made in pronunciation. The *Amigos Panamericanos* series by the Steck Company was used as the readers. During this semester, books I and II of this series were used. The children thought of their reading as pleasure and their books as means of enjoyment rather than a part of the daily routine. This attitude was encouraged, for we found that the children had more interest and achieved more when they



Sixth-grade Spanish Class, Laboratory School, Indiana State Teachers College

thought of their language study as fun rather than "work."

About twenty minutes of each class meeting were devoted to the reading lesson. All new words were explained in Spanish before the books were opened. This enabled the children to read without hesitation and with complete understanding.

As the children learned to read and write, simple dictation and completion examinations were given. Previously, only oral tests were given to check the students' comprehension. Both types were given during the second semester. Since some of the students did better with one type than the other, we felt that a combination of the examinations would give us a clearer picture of the students' understanding and would point out each child's particular difficulties.

Part of each class period was spent in conversation and singing. As the children learned more conversation and more about Spanish-speaking peoples, they were eager to meet someone from a Spanish-speaking country. There were several such students on the college campus, and we invited one to visit us. We asked him to tell us something about his country, Puerto Rico, and since he was a musician, he brought his guitar. The children were elated with his visit. The class had been taught how to introduce someone and how to react when they were introduced. When our visitor arrived, the teacher proudly introduced him to each member of the class. The children very politely replied in Spanish. The teacher was not surprised, but the visitor was. Suspecting, perhaps, that it had all been rehearsed, he proceeded to question a child in the front row. The student told him his name, his age, how many brothers and sisters he had and other information until the visitor finally began using vocabulary with which the student was not familiar. At this point, the visitor turned to the teacher and said, "My goodness, I never would have believed it." This remark delighted the class, for they were as proud as the

teacher of their classmate. The students enjoyed the visit very much and were even more eager to learn more conversation. An amusing remark was made by one of the boys after the visitor left. "Gee, senorita," he said, "he speaks Spanish as good as you do."

Experiences such as this one are valuable to both the students and the teacher, but of course, they can not be a part of every class meeting. We did find ways however, to lend a Spanish flavor to the room. One of these was in the form of a sign which was posted outside of our classroom. It read, "Aqui, Se Habla Espanol," or "Spanish is Spoken Here." The children were delighted with it, and even more so because the English translation was not given, and they were often called upon to translate for fellow schoolmates.

At the end of the year, we looked back upon what we had done. A great deal of time appeared to have been spent in singing, games, and conversation. This was as we had planned, for it had been a part of the atmosphere of fun and adventure which had enabled the students to speak Spanish directly without using English as a troublesome translator. They could carry on quite a lengthy conversation concerning things with which they associated each day: family, home, school, and play. They could read and write Spanish and could take simple dictation. Although they sang about only "ten little Indians," they could count to fifty. Their accomplishments and activities were numerous. Probably the most important thing they gained was a broadening of their outlook on the world and a better understanding of other peoples, for in learning the language of the Spanish people, they became familiar with the people themselves. It was with pride and pleasure that we said, "Aqui, Se Habla Espanol," for Spanish was truly spoken here.

EVALUATION OF SPANISH PROGRAM IN GRADE SIX

To: President Holmstedt
From: Ruth Runke

Yesterday, I met with Dr. Lautenschlager, Mrs. Peters, Miss Jane Gwin (student teacher who has been teaching Spanish in the Laboratory School sixth grade this year), Miss John and Mr. Syester (both sixth grade teachers). We held a candid and, I thought, very encouraging evaluation discussion of this year's project in teaching a modern language to upper elementary children. The children who participated in the program apparently are very enthusiastic and have asked if they will continue with Spanish next year in the seventh grade.

We talked at some length about how a program in foreign languages might be developed in the Laboratory School over a period of time through the elementary, junior high school, and high school years. We agreed, of course, that Latin would be essential in such a program at the high school level.

I am personally very much enthused about the good start which has been made this year in the sixth grade. Needless to say, I am—and have long been—convinced that the teaching of French or Spanish especially among the modern languages has a real place in the education of many elementary school children. I do hope that we shall be able to have at least a part-time qualified instructor during the next year who can give this program a really sound start. Such a person could also, I am sure, initiate the development of a language laboratory for the laboratory school.

To: President Holmstedt

From: Harley Lautenschlager

Re: Evaluation of Spanish Program
in Grade 6

During the school year 1958-59 sixteen sixth grade students have spent thirty minutes per period three times a week studying Spanish under the direction of Miss Jane Gwin. Although Miss Gwin has had no teaching experience, she apparently has done an excellent job with this group

of students. From all appearances they have enjoyed this program immensely. They have learned to carry on a simple conversation in Spanish, and have learned a relatively large number of Spanish words.

These students have asked that we continue this program for them next year in the seventh grade. Miss Gwin will be available next winter with the exception of the period in which she is doing student teaching. I have met several times with Dr. Runke and Mrs. Peters. They are anxious to see us continue this program, and enlarge the program as rapidly as possible. If teaching personnel can be provided for next year, it might be desirable to offer Spanish again to these future seventh graders, begin French with next year's sixth grade class, and offer Spanish to next year's fifth grade class. Mrs. Peters indicated that she planned to ask for a conference with you to discuss future possibilities of the modern language program in the Laboratory School.

You will find attached to this report statements concerning the Spanish program as written by Miss John and Mr. Syester, and three of the sixth grade students who participated in the program.

The children of the sixth grade have enjoyed participating in the foreign language program. The children have shown genuine interest in their study of Spanish, and they have come to realize that the study of another person's language can be fascinating. This, in turn, led to an interest and curiosity concerning the culture of those who speak Spanish. Thus, the children's concepts of their world have been greatly enlarged. This study provided an opportunity to enrich the curriculum for the more capable students.

Miss Mary Jane John, Teacher
Mr. Charles Syester, Teacher

Miss Gwin's Spanish class has been a wonderful experience to me.

To me I think I have learned a lot, yet had fun at it. It is nice to know you can speak a foreign language and understand it. It is lots of fun reading the Spanish book we have. Translating the words to English is always interesting. In a way, it's lots of fun to hear Miss Gwin speak Spanish. We can understand what she's saying and talk the same language back. Most of all, I have enjoyed singing in Spanish. Learning the way the Spanish people enjoy their music at the gay festival was also interesting. At our Christmas party we had a pinata. We spoke only Spanish and liked every minute of it. Each child had a turn at trying to break the pinata. When the pinata was broken everyone scrambled for the toys and candy inside just like the Spanish people do. It was a real privilege to have one year of a foreign language. I have been very proud just to be a member of the group and would be much prouder to be a member next year, if possible.

Marilyn Leith,
Sixth Grade Student

Miss Gwin's Spanish class has been a success to me. I am very proud to walk up to a friend and speak Spanish. I will admit that it was very confusing at first, but now it's fun. To me it is a privilege to take Spanish, because at many schools Spanish isn't taught. I hope that we will have Spanish next year, because I want to learn so much that I can go to Mexico some day and speak from my mind and not from a book. We have even had a Spanish party. It was so much fun! We had a pinata hanging from a rope, and everyone spoke Spanish during the party. We have learned many songs and games at the same time. Yet next year if we have Spanish, I just know we'll learn a lot. I will always try to do my best.

A Sixth Grade Student

I like Spanish because it is fun to find out what your name and your friends' names are in Spanish. I like

to read out of my reader and learn new words and how to spell them. Once we learn the vowels we can spell almost any of the words. I also like to count from 1 to 49. We learn very cute songs, too. It is fun to write words in your notebook and look back and try to make new stories or sentences. I liked making my scrapbook, too. We learned fast to read in our reader. We were in *Juan Y Maria*; now we are in *Juan Y Maria en La Casa*.

Miss Gwin is a very enjoyable teacher. She explains so everyone will know what a word means. She never leaves anyone out.

Having Spanish now will help us if we take a foreign language when we get in high school. If we didn't take it now, we would have to take more of it when we get in high school.

Karen Arbaugh,
Sixth Grade Student

Dear President Holmstedt,

I have enjoyed Spanish very much this year. This was the first year I have even taken another language. We have learned some songs and games. We finished one book and are about to finish another. Our teacher, Miss Gwin, is very nice. Everybody in our Spanish class likes her, too. On Christmas we had a party and a pinata. We also made cards on both Christmas and Valentines Day. We all hope that next year we will be able to take Spanish.

Sincerely,
Kathy Harkness

To President Holmstedt:

The reason I want Spanish next year is because Miss Gwin is a nice teacher. We all like the way she teaches us Spanish. We have learned a lot of things in Spanish also. We know how to count, we know some colors, we also know how to carry on a pretty fair conversation. We have learned to read and write just this
(Continued on page 46.)

Abstracts of Masters Theses

Ridgley, Ronald H. *Terre Haute during the Civil War*. October, 1958. 51 pp. No. 791.

Committee: Dr. Quentin Bone
Dr. Donald Scheick
Dr. Richard Gemmecke,
Chairman

PROBLEM—The purpose of this work was to synthesize the existing knowledge on Terre Haute during the years of the Civil War, and, if possible, to form conclusions as to the influence of the War upon social, political, and economic life in the city.

METHOD—Research into pertinent primary and secondary sources of Terre Haute social, political, and economic life during the period of the Civil War was the method used.

FINDINGS—Socially and politically there was little of permanent change in Terre Haute as a result of the Civil War.

The city furnished men to seven infantry regiments, two cavalry regiments, and one artillery regiment. This of course led to the usual wartime activity of sending food to the troops and contributing to charities for the families of men in the service.

The greatest effect on Terre Haute social life was the attempt by the Republican Party, or Union Party as it termed itself, to characterize most Democrats as "Copperheads," or Southern sympathizers. There seems to be little grounds for these disloyalty charges, but it undoubtedly contributed to social tensions.

Daniel Voorhees, Democrat Congressman from the Sixth District, was the main target in this area for the disloyalty accusations. Voorhees' only crime was that of being a conservative Democrat who happened to believe that the War was being handled in an unconstitutional manner.

There were undoubtedly "Copperheads" operating in Terre Haute. This

is attested to by the fact that the Indiana Chapter of the Order of American Knights was organized in the city in August of 1863. This was definitely a "Copperhead" organization. A Terre Hautean, William H. Harrison, was chosen as its Grand Secretary.

However, the disloyalty activity never reached the proportions in Vigo County as it did in Parke and Sullivan Counties. The "Copperhead" movement was completely distorted in Terre Haute, as in all Indiana, by the desire of the Republican Party to discredit the Democrats.

The greatest change in Terre Haute during the War was in the field of commerce and transportation.

The railroads had great growth in Terre Haute during these years. Three railroads crossed at Terre Haute. These were the Terre Haute and Richmond; Terre Haute, Alton, and St. Louis; and the Evansville and Crawfordsville.

The Wabash and Erie Canal could not compete with the railroads. The Canal was almost abandoned south of Terre Haute after 1862. Tolls dropped from a high of \$3,258.64 in 1862 to a low of \$475.74 in 1864.

There was no great amount of steamboat traffic on the Wabash after 1861.

The pork-packing industry was the largest industry in pre-war Terre Haute, but this was entering a period of decline due to the increase of shipments of swine by rail to Eastern cities.

The distilling and flour milling industries were increasing and soon would overtake the packing industry.

There were four private banks and one branch state bank in 1861. Most of these took advantage of the National Banking Act of 1863 to reform as National Banks.

The growth of Terre Haute is reflected in the value of town lots and improvements. In 1861 the figure was \$201,930, but by 1865 it had grown to \$6,298,990.

Terre Haute emerged from the Civil War economically stronger than when the conflict started.

Williams, Mabel Mikel. *Ways in Which Polymer Tempera Medium and Its Associate Materials Can Enrich Art Expression At the Public School and Adult Levels*. May, 1959. 101 pp. No. 792.

Committee: Elmer J. Porter, Chairman
Dorothea Swander
Edmund A. Ford

PROBLEM—The purpose of this study was to determine the quality and worth of Polymer Tempera Medium and its associate materials. Polymera Retarder and Polymera Clay Powder, in the enrichment of art expression at the public school and adult levels; and to further evaluate the qualities of art expression in the development and maintenance of the aesthetic sense, as a medium of democracy and a possible pattern for world peace

The evaluation and testing of materials were in the areas of (1) painting, (2) sculpture, and (3) transparencies, and crafts in combination with established art media known to be water soluble.

METHOD—The development of the study included the methods of criticism and experiment.

1. A survey of literature and definitions of terms establishing the chemical background of materials and philosophy of procedures involved was presented.

2. An investigation of the claims made by the Polymer Tempera Company as reported in their Handbook and Handbook Supplement establishing the validity of such claims was made.

3. An evaluation of the materials used in combination with established art media known to be water soluble was presented as a result of actual experiments by the writer in the areas of (1) painting, (2) sculpture, and (3) transparencies and crafts.

4. The results of these experiments were photographed and presented in the form of illustrations as an aid in the explanations of the experiments presented in the body of the thesis.

5. Each experiment was set up following a step-by-step procedure moving from (1) materials involved, (2) the procedure in the development of the experiment, and (3) the advantages of the Polymer Tempera unit of materials over known materials commonly in use.

6. In proving the worth of materials in combinations explored it was felt that aid to the classroom teacher at the public school level might be evidenced in helping to solve the interest span, limited storage space, messiness of materials used in craft experiences, and an aid in counteracting allergies, and in helping to simplify the painting and sculpture processes for the teacher and student at the adult level as well as to help enrich the possibilities of experiment for painter, sculptor, or craftsman at any age level and to ascertain the worth of the Polymer unit of materials when used as a sealer, adhesive, and binder.

FINDINGS—The actual use of the materials cited in the form of experiments as illustrated in the original works of the writer, reproduced in black and white photography, with use of materials, procedure, and advantages presented in a step-by-step sequence have stood the time test of from eight to ten months and have supported the claims made in their behalf. They were found to be compatible with established art media known to be water soluble, they were found to be insoluble in water after the drying period, they were found to be fast drying, they were found to present no problems in

overpainting, they were found to be compatible with many forms of color, dry pigment, water dispersed pigment, and all paints having organic gums or buttermilk as their binders. They were also found to be compatible with inert aggregates such as sand, vermiculite, plaster of Paris, sawdust, gravel, pebbles, rocks, sand glass, metal, sponge, yarn, string, cloth perlite, marble dust, and talc. It was found also that projects set up in combination with the Polymer Tempera Medium and its associate materials, Polymera Retarder and Polymera Clay Powder, was unaffected by light, heat, or weather and that it was non-toxic. The creator of this study being highly allergic was real proof of the qualities claimed for the product in counteractive allergies, in that she was not affected by the profuse use of the materials.

Projects made with the Polymer unit in their combination are light weight and noninflammable. Glazes made from Polymer Tempera Medium, either colored or clear, may be used to surface most any material except glass and plastic. Polymera Retarder in solution with art media known to be water soluble, keeps the unit of materials manageable for a longer period of time, and improves the brushing out quality of paint and the overall consistency of bulk forms. The Polymera Clay Powder adds bulk to any mixture making it possible to build up paint consistency to a thick impasto and to add a more porous quality to bulk forms used in sculptured projects.

The findings, as a result of the experiments offered in the study, prove the quality and worth of Polymer Tempera Medium and its associate materials, Polymera Retarder and Polymera Clay Powder, when used in combination with established art media known to be water soluble. From these findings the assumption that any procedure that promised simplification and enrichment of art expressions at any age level can enrich the development and maintenance of the aesthetic sense and may

be considered to be a medium of Democracy and a possible pattern for world peace.

Loveless, Billy G. *A Study of the Teaching of the History of American Education in the Secondary Schools*. August, 1959. v + 104pp. No. 793.

Committee: Dr. Richard E. Thurfild, Chairman
Dr. Elmer J. Clark
Dr. Charles W. Engelland.

PROBLEM—The purpose of this study was to determine what was being done about the teaching of the history of American education in the secondary schools of the United States.

METHOD—In order to determine what was being taught in the secondary schools in the area of the history of American education, an examination was made of twenty-two of the textbooks of the subjects which most generally impart information about American educational history, namely the subjects of United States history, American government, and problems of democracy.

FINDINGS—The indications of this study are that although widely varied attempts have been made by the authors of the textbooks in American history, American government, and problems of democracy, certain discrepancies have rendered the textbooks inadequate in presenting good, valid information concerning American educational history to the students in American schools.

The United States history textbooks, although making certain creditable attempts to present valid information, have generally rendered the material thus presented inadequate due to oversimplification and the omission of certain landmarks of American education.

The American government textbooks are negligent in presenting a good coverage of the historical events which would indicate the govern-

ment's role in education. Lack of adequate treatment of the historical development of the governmental educational offices and educational legislation and the inadequacy of the space allotment for educational history have rendered the government textbooks grossly inadequate in the coverage of the history of American education.

Problems of democracy textbooks devote very little space to the historical growth of American education and, of the six examined, were negligent by presenting untrue statements or conveying erroneous ideas concerning American educational history.

General indications rendered by the examination of the twenty-two social studies textbooks are that inadequate space allotments have necessitated the simplification of American educational history to the point that erroneous ideas are conveyed, and that certain poor choices of materials have resulted in omissions of important data which would otherwise have conveyed to the students a better concept of the historical development of American education.

Hall, Keith Allen. *A Course of Study in Photographic Techniques for Inclusion in a Course of Preparation and Production of Audio-Visual Materials*. August, 1959. No. 794.

Committee: Russell McDougal,
Chairman
Charles Hardaway
Howard Gillaspie

PROBLEM—The purposes of this study were (1) to study the present photographic facilities and equipment in certain selected high schools in Indiana to determine whether or not teachers would have the opportunity to use photography to aid them in their teaching if they were skilled enough to use it, (2) to prepare and present to a group a series of ten hours of instruction and laboratory work in photography, and (3) to study this method of presenting the content to determine the effectiveness of the method.

METHODS—The research methods used in this study were of several kinds. A three-page letter and questionnaire were mailed to selected high schools in Indiana to determine general practices and facilities concerning photography. From the results and responses to the questionnaire and based upon photography textbooks designed for beginning classes in photography, a ten hour unit of study in photography was developed. This unit of study was then carried out by a group of twenty-one graduate and undergraduate students. A comparison of a pre-test and a follow-up test was used to help determine the effectiveness of the unit of study. Each student in the group was also given an opportunity for improving the unit to make it more helpful for him in his teaching situation.

FINDINGS—The review of the related literature seemed to suggest that the value of photography in education as an educational tool and as an important factor in increasing public support of education has just begun to be realized. A fuller use of photographic processes is a goal toward which schools should work.

Whereas the survey of schools in Indiana indicated that 58 per cent of the respondents had darkroom facilities, 44 per cent of the responding schools provided cameras for teachers to use, and only 38 per cent indicated that photography was used in the classroom in their school, it would seem to suggest that the high per cent of schools indicating that photography was not used in the classroom in their schools (62 per cent) is not caused by a lack of equipment or facilities. A high per cent (68 per cent) stating that teachers in their school would use photography more in their teaching if they were more skilled in it might imply that it is a lack of skill and knowledge rather than a lack of facilities and equipment which has kept photography from advancing farther than it has as an invaluable teaching aid to teachers.

The writer feels that the experi-

mental unit was quite successful in orienting students to thinking about their teaching situation and problems in terms of photography. This conclusion is based upon informal conversations with various students from the group.

Winegar, Dwight W., *A Creative Interpretation of Abstract Painting*, September, 1959 No. 795, 91 pp.

Committee: Dr. Ronald Farmer
Dr. William Ashbrook
Mr. Elmer J. Porter,
Chairman.

Abstract painting finds its roots in the very nature of abstract thought. Abstract thought deals with ideas by means of concepts composed of centrally aroused and peripherally aroused elements which are inter related within the concept and between concepts by the movement of the conscious through the material of the mind. The mind is often directed by "tasks" which it sets for itself to solve inconsistencies between the individual and his environment, but the mind also tends, if given enough freedom, to create tasks within itself which bear no direct relationship to purely environmental problems. Problems which do not directly lead to the practical adjustment of the environment to the individual or vice versa may be considered abstract because they do not deal with a tangible or truly communicable world. Abstract art may be an attempt at the objectification of an individually original and actually impractical inner experience.

Fifteen oil paintings were created and discussed by the writer. His purpose was to find an individually valid mode of expression based upon an interpretation of abstraction as a manifestation of the absolute artistic volition. He attempted to handle technical means intuitively in order that volition and not technique might be the chief motivating force.

Gill, Paul L. *A Study of the Teaching of Speech in the Secondary*

Teachers College Journal

Schools in Indiana. August, 1959. 38 pp. Number 796, Series 1

Committee: Dr. Clarence Morgan,
Chairman
Dr. Gladys Rohrig
Dr. Joseph Schick
Mr. James Boyle

PURPOSE—The purpose of the study was to secure and evaluate information concerning the extent of the teaching of speech in the secondary schools in Indiana.

Data for the study were obtained through the use of questionnaires sent to 500 teachers of speech in Indiana secondary schools. The following results are based on 255 returns out of a possible 500.

FINDINGS—One hundred ninety-four, or 76 per cent, of the 255 secondary schools in Indiana offered some form of speech instruction during the 1958-1959 school year.

All of the 255 schools surveyed offered speech instruction either at the eleventh grade level, or at the twelfth grade level, or at both levels.

Niney-five schools offered speech instruction at the eleventh grade level at some time during the school year.

One hundred seventy-four schools offered speech instruction at the twelfth grade level at some time during the school year.

One hundred forty-four schools offered speech instruction in the form of separate courses.

Fifty schools offered speech instruction as part of an English unit.

A unit or course in general speech was the most widely presented form of speech instruction and was offered in 86 per cent of the schools.

A unit or course in radio speech was the less frequently offered form of speech instruction, it was offered in 42 per cent of the schools.

In their programs of speech instruction, over 50 per cent of the schools introduced speech in the following order: (1) general speech, (2) dis-

cussion and debate, (3) oral interpretation of literature, (4) theatre, and (5) radio.

The average speech class enrollment was 19.8 students.

Student speech organizations were maintained in 44 per cent of the schools.

Fifty-seven schools stated that membership in their speech clubs was open to all students in the school, and thirty-two schools replied that it was not.

Fifty-five schools required their students to participate in speech activities in order to gain membership in the club, and thirty-six did not.

Students in 29 per cent of the schools participated in some form of speech activity during the school year.

Only 22 per cent of the schools required their students to participate in speech activities as part of the speech unit or course.

Recordings were the most widely used teaching aids, and were employed by 82 per cent of the teachers.

Library reference books were the second most widely used teaching aids, and were employed by 65 per cent of the teachers.

Over 50 per cent of the teachers ranked the following teaching aids in order of preference: (1) recordings, (2) pamphlets and bulletin boards, (3) pictures, (4) films, (5) library reference books, (6) model stage properties, and (7) field trips to radio stations and television stations.

The three most widely used speech texts were: *NEW AMERICAN SPEECH*, *SPEECH—A HIGH SCHOOL COURSE*, and *YOUR SPEECH*.

The percentage of teachers preferring one text to another because it was "satisfactory" and "met the needs of the speech course" amounted to 40 per cent.

Eleven teachers were using county-adopted speech texts.

Almost 51 per cent of the teachers did not offer any reason for preferring one text to another.

Almost 70 per cent of the schools had access to (and used) a tape recorder, public address system, and stage facilities.

Almost 50 per cent of the schools had access to (and used) record playback equipment.

Twenty-four schools had radio studios but did no live broadcasting.

Nine schools in the state have radio facilities and did live broadcasting during the school year.

The percentage of schools having access to city broadcasting facilities amounted to 32 per cent.

The percentage of schools having access to city television broadcasting facilities amounted to 22 per cent.

The majority or 58 per cent, of the teachers of speech held a bachelor's degree, and 40 per cent held a master's degree.

The majority of teachers of speech, or 47 per cent majored in English; 23 per cent majored in speech; and 14 per cent majored in education. The percentage of teachers of speech who had majored in other fields was quite low.

In the number of speech courses ranging from 1 to 80, over 50 per cent of the teachers of speech who had majored in English had from 1-12 courses in speech.

In the number of speech courses ranging from 1 to 80, 45 per cent of the teachers of speech who had majored in speech had from 15-25 courses in speech.

Almost 40 per cent of the teachers of speech were either beginning teachers, or had been teaching from 1-5 years, 32 per cent had been teaching over twenty years.

Schools employed two or more speech teachers with enrollments from 800-4500 students.

Coppedge, Robert J. *Personality As Determined By The Sixteen Personality Factor Test, And Its Relationship To Musical Tastes*. August, 1959. Series 1, Number 797.

Committee: Mr. James W. Barnes,
Chairman
Dr. Rutherford B. Porter
Dr. Lawrence Eberly

PROBLEM—To determine whether or not an individual's personality influences his likes and dislikes for different kinds of music studied in the music appreciation classes.

METHOD—The music appreciation classes at Indiana State Teachers College were used in this study. Fifty students were selected. On one day they were given the Sixteen Personality Factor Test. On the following day they were given a music preference test of the writer's own design. The music test had two principal divisions—historical and mechanical. The historical part was broken down into five periods: Baroque, Classical, Romantic, Late Romantic To Present, and Impressionistic. The mechanical part was broken down into five molds of music construction: Sectional or Symmetrical Repetition, Repetition by Variation, Repetition by Fugal Treatment, Repetition by Development, and Free Forms. The periods were designated by capital letters, and the molds of construction by Roman Numerals. Twenty-one selections were recorded on tape, each having a duration of two minutes. The students had a choice of five responses to each selection played: Like Very Much, Like Better Than Average, Average, Like Less Than Average, and Do Not Like At All. The raw scores of all factors on the personality test and the thirty-one raw scores on the music test (twenty-one, plus five period and five mold of construction scores) were sent to the I.B.M. Data Processing Center in New York for computation.

RESULTS—There were four hundred and ninety-six coefficients of correlation possible. Of these, the writer chose sixty-four which seemed signifi-

cant in comparison with the coefficients as a whole. One interesting fact was that each factor of personality that influenced more than one choice of music, influenced them all in the same manner (positive or negative). In this study, using the null hypothesis, any correlation coefficient exceeding .27 is significant at the five percent level of confidence, and any coefficient exceeding .35 is significant at the one percent level. The two factors of personality which, according to this study, yield the greatest influence on musical preferences, are Factor C (Mature versus Immature) which correlates negatively with many music factors, and Factor I (Premia versus Harria) which correlates positively. A table is included showing all significant coefficients of correlation.

The Personality Factors are bipolar descriptions of source traits, the high score being listed first, followed by the low score as in the case of the above examples.

On certain factors, personality scores can be predicted from a known music score. One example of this is the C Personality Factor score from the II score on the music.

It seems, as the result of this study, that teachers of music appreciation might well give the Sixteen Personality Factor Test to their classes to determine where the best place to start the course would be.

Friley, Harry C., *A Study of the Characteristics of Intelligence Apparent in Free-Design*. July, 1959. 84 pp. Number 798.

Committee: Mr. Elmer J. Porter,
Chairman
Dr. Ronald Farmer
Dr. Charles Hardaway

PROBLEM—This study was made to determine the existency of relationships between intelligence quotients of children and their respective intellecto-emotional schema evident in subjective free-design configurations.

PROCEDURE—In the semesters of school between September, 1949, and June, 1958, 2,000 separate and individual intelligence quotients of students, grades 4 through 8, from select schools in the Evansville School Corporation, Evansville, Indiana, were recorded from the students' respective educational cumulative records. The IQs of the students were grouped according to twelve levels of nearest IQ attainment, 50, 60, 70, and etc. through the highest recorded level of 160.

The students, in routine art class attendance, were administered an assignment in crayon rendered non-objective design. Three weeks later an identical assignment to the same students was made in order to determine, by comparative analysis, whether the intellecto-emotional design schema was consistent with the individual. The resulting 4,000 free-designs were then grouped with respective intelligence quotients.

Designs from IQ levels were compared for possible existing characteristics in compositional structure peculiar to specific IQ levels. Critical analysis, in terms of the five plastic elements, was made of design configuration from each IQ level for relationships that may exist between the characteristics of free-design schema and intelligence quotients.

RESULTS—Comparative analysis of the two assigned free-designs revealed positive evidence of consistency in the intellecto-emotional schemata with the individual over the three week interim.

Examination of designs from various IQ levels disclosed evidence of an affinity of intelligence with specific compositional structure in design schema.

Broad and specific characteristics in the use of the five plastic elements and their functional application to the free-design configuration indicated significant relationships with specific levels of intelligence.

Eleventh Indiana Workshop on Teacher Education

Turkey Run State Park - November 9-11, 1958

The eleventh annual Teacher Education Workshop sponsored by the Indiana Unit of the Association for Student Teaching convened at Turkey Run Inn for the three days November 9, 10, and 11, 1958. The theme with which the participants concerned themselves centered on Teacher Education in Indiana. The general chairman of the Steering Committee* and of the workshop sessions was Dr. Victor Lawhead, Ball State Teachers College.

President John R. Emens, Ball State Teachers College, addressed the first general session using as his subject "Teacher Education Today."

Dr. Emens traced the history of teacher certification. He said, "Teacher certification is for the purpose of protecting children from unqualified, unscrupulous, and undesirable people who might get into the teaching profession. If we set this up on a co-operative basis, in such a way that all people who have a stake in this problem—the general public, the teachers themselves, the employing officials, the teacher education institutions, the state offices that have the administration of this responsibility—then we come out with a set of regulations to meet our stated purpose."

He spoke of the problems involved over a long period of time in meeting the needs of adequate certification standards. "One of the major problems," he said, "is that of reaching across state lines with reciprocity programs of teacher education to meet laws of various states. Another of the major problems is to develop the main standard of rules and to provide enough flexibility to apply these standards to individual people who may have graduated beyond those various state lines."

He also spoke of the various positions needing different kinds of programs. The different kinds of schools and the different kinds of jobs within those schools: people in administration, in supervision, in guidance, in special education, each one of these needs to be qualified in a somewhat different way.

Dr. Emens feels there is a major problem in "what are we going to do with the explosion of knowledge existent today." He discussed the tremendous extension of information available today in various subject matter fields as contrasted with teaching materials of 35 or 40 years ago.

His final challenge was "How can we work together to develop people who are appropriately and wonderfully qualified, not only of paper qualities, but qualities of integrity of spirit, ability and skill and have them sufficiently able to adjust to the new kind of knowledge that comes up every week?"

The symposium Report on "Teacher Education in Indiana" was presented by four men: Dr. Earl Johnson, Secretary, Commission on Teacher Training and Licensing of the Indiana State Board of Education, Dr. Clinton Green, Chairman, Legislative Study Commission for Teacher Training and Licensing, Dr. Wendel W. Wright, Chairman, Teacher Certification Committee appointed by the State Superintendent of Public Instruction and Dr. Howard Batchelder, Chairman, State Committee on Teacher Education and Professional Standards, Indiana State Teacher Association.

These reports from these various committees and commissions studying teacher education and certification in

Indiana gave the workshop participants a timely and accurate synopsis of the present activities currently in progress.

In the concluding general session for the workshop, Dr. Russell Humbert, President of DePauw University addressed the participants on the subject "Goals of a Lifetime." Dr. Humbert said "It is a rather easy thing that we converge on Turkey Run thinking about the essentials of education and yet forget about the main person involved—the student and his goals for a life-time." He quoted from one of the speeches of John Stuart Mill who said "Men are men before they are lawyers or physicians or manufacturers. If you make them capable and sensible men they will make themselves capable and sensible lawyers or physicians."

He challenged the profession to realize its weaknesses. He declared the first people to recognize weaknesses and the places where strength is needed are the people who are doing the job out on the firing lines as teachers. "If you really want to find the people who can give you a first hand report on the weaknesses of the system of public education in America," he said, "talk to the classroom teacher. He or she will be the very first one to do a very constructive critical job and not the person who is standing on the outside who has been out of school for the last fifteen or twenty years."

Dr. Humbert ended his inspirational address saying, "In our America system by the very nature of education itself, it is quality that counts. You can't think of having education without having this one word as a watchword, quality. As we think of these goals of a lifetime, that watchword must be at the forefront of our minds. As we attempt to spread the faith of education we need to think of lifting our sights constantly."

STEERING COMMITTEE:

Wenonah G. Brewer, Indiana State Teachers College; Mary Endres, Purdue University, Robert Faber, DePauw University; Lewis Gilfoy, Indianapolis Public Schools; Bernard J. Kohlbrenner, University of Notre Dame; Victor B. Lawhead, Chairman, Ball State Teachers College; Russell Merkel, Indiana Central College; Virgil Schooler, Indiana University; John Young, Mishawaka Public Schools.

Summary of Group Reports

Group I

Selection and Retention of Candidates in Teacher Education

Discussion Leader: Dr. Mary Endres, Purdue University

One of the most elusive professional problems which school systems and teacher education institutions must face and solve is that of defensible selection and retention of candidates in teacher education. Its elusiveness inheres partially in the complexities involved in attempting to define objectively the criteria for evaluating successful teaching. Although research has been directed to this problem in recent decades, definitive answers and reliable predictive formulae have not appeared. Since the qualities essential to good teaching are so controversial, it is extremely difficult to establish and operate a program designed to screen unlikely candidates from those who have teaching potential.

Other factors complicating the problems of selection and retention in teacher education include variations in teaching situations, in criteria applied by employing and evaluating officials, and in qualities possessed by successful teachers. Empirical evidence indicates that a given teacher may be adjudged successful in one situation but not in another. Furthermore, different teachers may be considered successful in the same school although they possess quite dissimilar characteristics. It would appear, therefore, that after certain general qualifications have been satisfied, teaching success must be defined in relation to specific situations and conditions rather than in general terms.

There is no need to rehearse the repertory of difficulties in the area of concern covered by this report for

the situation is familiar to all teachers interested in improving their profession. The study group devoted to selection and retention of candidates in teacher education was completely aware of the rather frustrating history of its problem. Nevertheless, the members knew that the issue was a crucial one and could not be avoided. A profession must assume responsibility for controlling entrance into its ranks, as well as disciplining its active members. Teacher education institutions in Indiana have accepted the responsibility of providing competent graduates who can function successfully as teachers in the public schools of the state. This responsibility carries with it the obligation to prevent incompetent candidates from achieving certification as teachers.

Despite what appears to be an urgent need to increase the quantity of qualified teachers for the classrooms of Indiana, the problem cannot be solved only by increasing the number of graduates. Induction of poorly qualified candidates into teaching inflicts a burden on an entire generation of children, downgrades the profession and makes a mockery of teacher education programs. Teacher education institutions cannot delay application of screening criteria until research offers some infallible formula, as desirable as this might be. Decisions about the professional potential of current candidates must and are being made now on the basis of the best information and judgment available. It is expedient that the programs now in operation be scrutinized critically, to the general benefit of all teacher education institutions in the state, to the young people of Indiana, and to the teaching

profession. This was the basic rationale adopted by the study group devoted to selection and retention of candidates in teacher education. This realistic appraisal set the stage for a critically constructive approach to a controversial, elusive, vital, and practical question.

CHARACTERISTICS OF GOOD PROGRAMS OF SELECTION AND RETENTION IN TEACHER EDUCATION

Programs of selection and retention in Indiana's colleges and universities which prepare teachers must be as distinctive as the institutions themselves. Nevertheless, since they profess to promote a common purpose, —retention in the teacher education program of only those candidates who appear to possess promise as successful teachers—they should have common, as well as distinctive, characteristics. The study group attempted to delineate and summarize these general qualities.

1. *They use all acquirable data on students in determining eligibility for entry to the program.*

Common sources include high school records, personal data obtained from college personnel files, college academic records, health information, and standardized test data related to personality, professional interest and attitude, and academic ability. In addition, a number of state schools employ individual and group interviews and evaluations of high school principals to help in screening applicants. An attempt to balance subjective and objective evidence appears to be a usual approach.

Selection devices are applied either at college entrance or at entrance to the teacher education program. State institutions are under more obligation to accept all qualified applicants at the college entrance point than are private schools. Therefore, they appear more likely to emphasize qualification for entry into the teacher education sequence. Most institutions attempt to maintain a continuous pro-

gram of selective retention throughout the college years.

2. *They review candidates' eligibility for continuation on the teacher education program at regular check points.*

Not all institutions consider this aspect of the selection program equally decisive. A number of study group members testified that after initial selection procedures has been applied at their schools, nearly 100% survival of applicants was typical.

Common check points in the professional education program occur at the end of each academic year, at advancement to the upper division of college work, and at entry into student teaching. Academic success in both general and professional courses is a significant criterion in earlier phases of the screening program. Later, concerns center about such factors as personality, health, and success in working with children and adolescents.

3. *They try to make decisions at the earliest possible time about students' eligibility to proceed on a teacher education program.*

On this point, the study group was in complete accord. In addition to the economy of institutional and human resources involved, the moral responsibility to the student was highly significant in the considerations of the members. Postponing disqualification until the teacher education program has been almost completed seems institutionally inefficient and unjust to the candidate.

It is true that certain abilities cannot be tested until the student assumes responsibilities in a classroom. This would mean postponement of judgment until the junior or senior years in practically all teacher education institutions. However, preliminary decisions can be made in the earlier years and, if professional judgment indicates that continuation on the program is a hazardous venture for the candidate, he should be so informed. If he decides to continue

despite such admonition, the responsibility is more largely his and the moral obligation of the institution to recommend him for certification at completion of the program has been vitiated. Despite such precautionary measures, the possibility that a student may be dropped from the program during his last year, without previous warnings, cannot be eliminated. Professional predictions are not infallible and students do not always display the same characteristics throughout their college careers.

Early attempts to eliminate unsuitable candidates from the teacher education program make guidance into other curricular areas possible. This flexibility varies in different institutions, depending, of course, on the breadth of curricular offerings. Nevertheless, the principle remains the same. Its application assists students in evaluating their aptitudes and professional decisions and often confirms doubts they were already beginning to feel. It is far more desirable to reassess one's college aspirations early in the program, when modifications can be made with relative ease, than to continue until a change of purpose would entail considerable inconvenience and expense. A candidate who acquires a teaching certificate, although he has decided that he made a wrong professional choice, can hardly be expected to be a credit to the institution graduating him.

It is not only the sub-standard or uncommitted candidate who would benefit from an early interview regarding his professional choice. Students who appear to have desirable qualifications for teaching would be quite likely to respond positively to verification of their decisions. Knowing that they have been recognized as good professional possibilities would stimulate them to achieve their goal with greater confidence.

In instances where the motivation and determination are high, despite contrary recommendations, a candidate may be stimulated to correct

the qualities which jeopardize his success. If he is advised early enough, he may, with or without help, remedy his deficiencies and emerge a likely candidate. This possibility for salvaging potential rejects from the program is a strong argument in favor of early communication with unlikely candidates.

4. *They aim constantly at improvement of the teacher education graduate.*

A good teacher candidate should not only possess the qualities of a good student of higher education but also those traits peculiar to a successful teacher. A good student must maintain academic respectability to pursue his program to completion. Teacher education candidates should be highly qualified academically since their profession is scholastic in nature. Their academic records should be above average when compared to a cross section of a college or university population. A program of selection and retention in teacher education should aim at raising the scholastic level of its candidates. The accusation that college students enter the teacher education program after disqualifying in other departments should never be justified as a general practice. However, guided transfer from one program or department to another on a given campus should occur as part of the over-all counseling procedures.

In addition to aiming at graduation of candidates who are well qualified academically, the selection and retention program should strive to develop students who possess the less tangible qualities requisite to teaching success. The study group illustrated the roster of such qualities by citing initiative, a sense of humor, a high energy level, love for children, emotional stability, social perceptiveness, etc., but did not feel obliged to prepare an inclusive listing. Research in the area of teacher success—its definition and measurement—is replete with statements of related qualities and characteristics. People working

at the problems of selection and retention in teacher education have a professional obligation to become familiar with the pertinent research and to apply its findings in their practices.

It should be unnecessary to have to choose between student candidates who are academically adequate and those who possess desirable personality qualifications. Rejection on either basis is essential if desirable standards are to be maintained in a teacher education program.

5. *They engage in careful and constant evaluation of their results and techniques and always strive for improvement of the selection and retention program.*

Experimental programs related to selection and retention of students are being carried out in a number of Indiana institutions of higher education. Two such designs were described in some detail by representatives of Purdue University and Ball State Teachers College.

The Purdue program emphasizes careful selection of applicants at the point of college entrance for the program leading to elementary school teaching. A plan for careful screening of secondary education applicants at entry to their professional programs will be initiated in the near future. Both plans include formal application by the student, completion of a battery of standardized tests, summarization of personal and cumulative student data, review by a screening committee and an individual interview with a faculty member in the Division of Education. The thoroughness of the design is aimed at reducing as far as possible the necessity for subsequent elimination from the teacher education program. Rejection from the program following acceptance may result from failure to maintain the minimum grade point average for the University or special review of the student's record upon recommendation by staff members. Admission to student teaching is denied when an applicant falls below

the minimum academic standard for graduation from the University.

The two Ball State designs discussed in the study group are experimental in nature and have not yet been applied as general programs of selection and retention. One is attempting to establish techniques for predicting college success for classifications of students in various curricula at specified points in the undergraduate program. At present research is attempting to establish relationships of recorded data on students to college success, as indicated by retention in the institution and the program of major study, and by grade point average in a variety of curricular categories at selected times.

The other design concerns only majors in elementary education. It is attempting to establish criteria for predicting at the earliest possible time the certifiability of candidates by utilizing, in addition to objective and cumulative data, a series of individual and group interviews to get at the less tangible aspects of qualifications for teaching. Both designs are directed toward conservation of student potential through utilization in guidance relationships with students of information derived from the studies. Neither experimental program has progressed to the point where valid conclusions can be drawn. Both are long-term in nature, since they involve longitudinal study of student performance throughout the program of higher education and beyond graduation.

The study group expressed considerable interest in the experimental programs described. Dissemination of progress reports and conclusions to other Indiana institutions of higher learning was strongly recommended. The group also endorsed the suggestion that next year's conference include a study problem on selection and retention of candidates in teacher education. This would encourage initiation of new experimental programs and permit further discussion of those already in progress.

PROBLEMS RELATED TO ESTABLISHING AND CARRYING OUT SUCCESSFUL PROGRAMS OF SELECTION AND RETENTION IN TEACHER EDUCATION

The study group introduced a wide variety of concerns and issues relative to programs of selection and retention of teacher education candidates. Only three of the most common and vital problems will be reviewed in this report. They were selected on the basis of expressed concern within the group and the degree of discussion they engendered.

1. *How can the requisite staff time be made available?*

A good program of selection and retention in teacher education requires both a dedicated staff and administrative support. The research aspects of the program can be accomplished only if adequate clerical services are available and if I.B.M. facilities are accessible. Graduate assistants are invaluable aids in carrying out routine procedures under the direction of faculty personnel qualified and freed to do the job.

When interview techniques are part of the design, an added faculty burden is imposed unless load allowances are made. In experimental programs, this burden is likely to be cumulative in its demands on faculty time, since new groups are added each year from the Freshman Class.

A program of selection and retention must be continuous and consistent because of its essentially longitudinal nature. This demands agreement, if not uniformity, throughout the study in policy and practice on the part of administrators and cooperating faculty members. Frequent turnover among participants could endanger the success of the program, especially during its formative period. Furthermore, dedication to the program and confidence in its feasibility must be characteristic of those individuals making the interviews and reviewing the data. This would imply

that only highly interested faculty members should be invited to participate. It implies, further that careful preparation should precede induction of new participants into the program and that active faculty members should meet regularly to stimulate one another, as well as to maintain a common point of view.

2. How significant is grade-point-average in establishing criteria for selection and retention in teacher education?

This issue stimulated lively interchange in the study group. There was general agreement that academic success was highly desirable in a teacher education candidate. Agreement on the precise criterion was more difficult to obtain. The majority opinion appeared to favor requiring a grade-point-average at least slightly above that for general graduation.

A number of considerations influenced thinking of group members on this issue. There was considerable concern for combating what seems to be a popular notion that it is easier to achieve academic success in teacher programs than in those leading to other vocations and professions. Although an above average grade-point-average does not guarantee an above average teacher, the study group believes it would raise the odds. Academic proficiency should not be sacrificed to the demand for more public school teachers.

The significance attached to scholastic achievement by employing officials of graduates from teacher education programs was also considered. Some group members contended that graduates with mediocre grade-point-averages were more employable than those at the top of the academic achievement scale. Although this condition is often cited, the group did not consider it typical or necessarily indicative of the superiority of average over high achieving students as successful teacher possibilities.

Justification for requiring a higher grade-point-average on the teacher

education program than on other curricula stemmed from the conviction that such practice would up-grade the quality of applicants. Some evidence to support this viewpoint was supplied by study group members.

Another concern dealt with the relationship between undergraduate and graduate work in teacher education. Because all teachers who wish to remain in the profession in Indiana must qualify for a Master's Degree, the pertinent question of whether all four-year graduates in teacher education should possess the potential for successful advance study must be raised. Is it justifiable to permit candidates to select and qualify for teaching as a life work when there is reasonable doubt that they possess the aptitude for filling requirements of the Master's Degree? Would it not be reasonable and morally defensible to build an undergraduate program of selection and retention that would retain only those candidates who have the requisite potential for graduate work?

The dilemma described above is a real concern in teacher education institutions throughout Indiana. The need for increased numbers of graduates to serve the school needs of the state must be balanced against the responsibility of the teaching profession to maintain the highest possible quality within its membership. It is true that not all graduates plan to make teaching a life work, and they would not be troubled by the requirements for permanent licensing. It is also true, however, that many individuals, especially among the female teachers, return to teaching at a later time in life when the requirements would apply.

It would be highly undesirable to so dilute the Master's Degree programs in teacher education to the point where they would no longer represent quality work. On the other hand, the purpose of the requirement when applied to teachers, was to improve the quality of instruction in the public school classrooms of the state,

rather than to conform to any arbitrary preconceptions of what a Master's Degree represents. Five years of preparation would be more likely to promote this responsibility, regardless of whether minimum standards were maintained by the student. Resolution of the difficulty seemed to the study group to lie in awarding more than one kind of degree or certification after completion of the fifth year, each of which would fulfill the state requirement. In this way, the traditional Master's Degree would maintain its dignity and meaning and the state's need for highly trained teachers would also be satisfied.

3. Are problems of selection and retention the same for all institutions preparing teachers?

The answer to this question must be in the negative since controls under which institutions of higher learning operate are so disparate. Private schools are more free to limit their enrollment than are state supported institutions. This implies that selection may be emphasized more by private schools, while others may have to rely more directly upon programs of selective retention.

Institutions offering a limited number of curricula would be at a disadvantage when compared to larger colleges and universities when applying rechanneling practices to teacher education rejects. This might imply a need for stricter selection at the time of college entrance for smaller and single purpose institutions.

Teacher education colleges might find it easier to operate selection and retention programs especially adopted to their candidates than would be possible in multi-purpose institutions having a department or school of education which is not independent of other institutional divisions.

Some institutions begin their teacher education programs in the first college year, while others concentrate their professional courses in the last two years. Obviously, the programs and problems of selection and re-

tention in the two types of organization would not be identical. Selection programs based on two years of college performance would have a surer base from which to predict. However, they would be able to consider a student's record only in the area of general education, which may not be a valid criterion for estimating future success on a professional curriculum. Four-year programs would have to rely more on high school and entrance test performance in judging eligibility for enrollment in a teacher education program. However, institutions operating on such an organization would have an advantage in their retention programs since candidates would be exposed early to professional courses.

Despite the inevitable individuali-

zation of institutional programs of selection and retention in teacher education they have a common purpose. All are concerned with preparing the best possible teachers for the schools of Indiana. All must share the responsibility of safeguarding the children of this state against incompetent teachers. There are no infallible schemes for screening out all candidates who lack adequate potential for success in the teaching profession. Errors will be made and some injustices will be committed, but an honest effort to do the job effectively is an obligation of each institution recommending teacher education graduates for certification. Institutions cannot avoid making decisions about the qualifications of graduates so there is a moral responsibility to

do the task as intelligently as possible. Graduates of different schools may justifiably represent different program emphases and points of view, but all must be competent to discharge effectively the educational responsibilities entrusted to them.

The study group concerned with selection and retention in teacher education left the conference with a deeper appreciation of the problems with which they wrestled, a conviction that more could and should be done in the institutions of the state to find reliable answers to the perplexing questions involved, and a recommendation that future conferences continue work in this area of general concern.

GROUP RECORDER: Dr. Leslie Mauth,
Ball State Teachers College

Group II

General Education For Teachers

Discussion Leader: Dr. Glenn Griffin, Purdue University

INTRODUCTION

The group discussion was opened by asking the question, "What is general education?" Two approaches were immediately suggested: a) an emphasis on subject matter, or content, b) emphasis on concepts, outcomes, competencies, etc. While our specific discussion was directed towards an analysis of the general education of teachers, it was made very clear that the general education of any human being is of greatest importance, no matter what profession a man may choose to follow. In line with this thinking, it was asked, "What then is the mark, the characteristic, of an educated man?"

Relationship of General Education to Other Areas of Learning:

The ensuing discussion treated of the relationship between general education, professional education, and

specialized education. In a specific application it was emphasized that a concentration on the culture of only western civilization is certainly not sufficient in modern times. After some discussion on content matter, others insisted that we dare not overlook the importance of skills, habits, attitudes, and other related areas. Ultimately, it was resolved that if an individual does not possess the objective of "Intellectual Curiosity," "he should get out of the business of teaching." Not only was this objective of intellectual curiosity emphasized, but the following list of qualifications of an educated person was also discussed in great detail: a) knowledge, b) evaluation of knowledge, c) intellectual curiosity, d) development of proper attitudes, e) achievement of necessary skills. Other speakers illustrated the fact that modern industry, likewise, is seeking not the "extreme specialist," but rather the broadly, the generally educated person." Another very significant observation was the remark that "an educated person can

communicate easily and intelligently with other educated persons." It was suggested that in the ensuing discussions we would speak of such topics as the following: (1) knowledge, (2) use of knowledge, (3) continuation of knowledge throughout life, (4) an emphasis on "quality of spirit", a way of life, a philosophy of life.

General Education . . . Do Teacher Preparation Courses Contribute to It?

The question of whether there is anything in the field of general professional education which contributes to "general education" introduced another discussion. It was suggested by one member of the group that the general education of teachers should emphasize a fourfold viewpoint: (1) the psychological (this would consider man's nature); (2) the sociological (this would consider the influence of man's environment upon man); (3) the philosophical (this would emphasize direction to man's life, a way of life; (4) the historical (this would give perspective to man's life.)

How Are We To Achieve The Goal of The Educated Man?

The question was then raised,

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"How are we going to achieve the goal of the 'generally educated man?'" Before discussing the specifics of the various institutions represented by our group, one person suggested that we get away from the terms, "general" and "liberal" and simply use the term, "common education," an education which should be expected of every man. A further modification of the areas to be embraced in general education was then suggested to the group. Among the areas listed in this modification were the following: Social Sciences, Humanities, the Arts, Physical Sciences, Philosophy, and Theology. The problem was then raised, "Can all the areas which have been suggested, actually be handled properly in a four-year program?"

Specific Programs of General Education Currently in Vogue:

One program of general education was described in which it was made very clear that eventually in this particular institution, the proposed program of general education resulted in a procedure wherein all general education courses became "individualized approaches" on the part of the teachers who participated in this program. Another person described a program of general education in which a common body of knowledge is demanded of all students; while under other circumstances, students in this same program are voluntarily invited to participate in teas, coffee hours, etc., where vital questions are discussed informally between faculty members and students, thus broadening the general perspective of all the people participating in such discussions. Another member of the group suggested that some form of evaluation of general education should be adopted after the completion of four years. The specific means suggested was that of the seminar. Others insisted that integration is a process which must continue throughout all the four years to be truly meaningful. Other programs such as those of

Michigan State, Wisconsin, and St. John's were referred to likewise.

Handicaps to General Education:

Various handicaps to a good program of general education were discussed next. The most obvious difficulty which faces administrators is the fact that often a very qualified teacher in the field of general education is lost to a college; and in many such instances the very program of general education in this school is disrupted due to poor planning. Many individuals criticize the practice of teaching "survey courses" in general education especially if such courses attempt to cover so much that the course is seriously "watered-down." One of the greatest obstacles to general education is the extremely "departmentalized" nature of many of our colleges and universities. It was observed that possibly many of our departmental teachers are too lethargic to care to change their traditional procedures of emphasizing only the material in their own highly specialized areas.

Integration:

The need for correct and complete integration in a program of general education was discussed in great detail. It was repeatedly stressed that "if we hope to achieve integration on the part of our students in a program of general education, teachers themselves must be so qualified educationally that they are capable of achieving such integration. The objective for all teachers should be the achievement of a sufficient educational background so that they can integrate all the areas of knowledge. It was likewise stressed that one way of achieving this basic integration of the totality of knowledge in a given college is by appreciating and accepting a basic philosophy of life which would give direction to all the efforts expanded on behalf of a truly and completely integrated program of general education. Many persons repeated the idea that "a person must

have something to integrate if he is to integrate." In other words, we dare not overlook the content of courses.

Why General Education?

Another discussion centered around the question of "WHY" with regard to general education. Answers proposed to this question were as follows: (1) Basic to a general education program is the desire to achieve truth in all the areas of human knowledge, since, "truth is the proper object of the human intellect;" (2) some urged that we have general education programs so that we may "survive" (cultural survival, personal development, and other related ideas were embraced in this concept); (3) It should be recognized that there is a difference between man and an animal...the rationality of man must be recognized, developed, and protected; (4) Speaking of survival, we mean not merely physical survival, but more importantly, cultural survival.

In any given college we must recognize the fact that the general education of our students is definitely everybody's business. We should seriously give thought to teaching techniques for achieving true general education.

Not Only Why, But How and What In General Education?

The group was divided on one occasion into a number of sub-groups to discuss in detail the particular aspects of the "How, Why, and What" of general education. One group offered the following suggestions: (1) we should include in the content of general education a discussion of the meaning of time from the viewpoint of a geologist, an archeologist, a biologist, an astronomer, an historian. (This was meant as an illustration of the way we may focus on a topic for the purposes of integration.) (2) The conception of the universe as a microcosm and a macrocosm should also be considered in detail. (3) The mechanics of heredity

and evolution must also be studied. (4) The following criteria for evaluation should be included: a) philosophy and ethics; b) moral and religious principles; c) the scientific method. (5) An appreciation of past civilizations and their relation to our own civilization and culture. (6) An appreciation of the fine arts. (7) Development of proper attitudes, human sensitivity to human needs.

Another group emphasized the following areas: English and Speech, the Social Sciences, the Physical Sciences, the Arts, the Humanities.

A third group suggested the following specific details as the content of a general education program: 1) language... a common native tongue, understanding, communication, etc. 2) the development of civilization,

both western and non-western. 3) the methods and practices of science. 4) the methods, problems, and practices of the social sciences. 5) A basic philosophy or religion, or both.

Others emphasized the need to study the causes of natural phenomena and the physical structure of the universe. This same group emphasized, likewise, the understanding of the relationships of man to his fellow man and his relationship to God... (the emphasis on a set of convictions or principles).

A final group listed the following as the proposed content of general education: 1) the writing and speaking skills. 2) Literature, world literature, or if one prefers, English, American, etc. 3) At least certain aspects of the fine arts, preferably all the fine

arts. 4) General history courses which include a developmental study of American education... (so many teachers know so little about the history of American education.) 5) Philosophy and Religion. 6) Basic work in the various natural sciences. 7) Honors or Tutorial opportunities for the gifted students.

Conclusion:

As a general conclusion, it was unanimously agreed that all teachers must have a well-rounded, broad, general education, if they hope to fulfill their obligations in the teaching profession.

GROUP RECORDER: *Rev. Ernest A. J. Lucas, C.P.P.C., St. Joseph's College*

Group III Professional Education of Teachers

Discussion Leader: *Dr. Bernard Kohlbrener, University of Notre Dame*

The chairman, Dr. Bernard Kohlbrener of Notre Dame, called the group's attention at the first meeting to the points made in an article by Earl Armstrong on the teacher education curriculum and the possible value of utilizing these as the basis of discussion in our group. The group at that time listed three questions of its own and spent some time discussing various points of view and answering them. The questions were:

1. At what points do elementary and secondary teachers have the same basic needs? Is there a common core?
2. Where might the two streams come together and where separate? For what kinds of work and experiences?
3. What is the source of our present

division of time and emphasis—particularly in student teaching and observation?

This first meeting was spent mainly discussing what we wanted to work on during the sessions of the study group. Mr. Pabst, who represents the Teacher Training and Licensing Division of the State Department of Public Instruction, called attention to the need for considering not only general preparation but also preparation for special areas such as nursery school, library science, and special education.

There seemed to be fair agreement among the members of the group with regard to essentials to all teacher education programs though there was some discussion of the level at which the introduction to education should be placed, the level at which observation could begin, and the way in which student teaching might be distributed. Some schools concentrate entirely in one semester and others

spread it out over a longer period but give shorter intervals of student teaching.

Courses in human growth and development are considered essential by everyone but are placed in different points during the four-year program. Some of the smaller colleges as well as Indiana State Teachers College put the elementary and secondary groups together for their courses in human growth and development. Other schools may have one semester of psychology which is common to both groups and divided the groups offering child development to the elementary group and adolescent development to the secondary group. It was felt by some members of the discussion group that a study of human development from early infancy through the period of aging was important for all students, and could therefore be handled by all those entering teacher education regardless of the level in the schools into which they planned to go as teachers. A number of the schools appeared dissatisfied with their plan and discussed revisions or are actually experimenting with revisions.

There was discussion also of whether general methods all handled in one integrated related battery were more useful than separate methods for the various special groups. Schools differ in their attitudes toward this point. The smaller schools tend to teach methods in one integrated related pattern while the larger schools appeared to lean in the direction of handling methods somewhat separately so that various faculty members may become more highly expert in individual fields.

Time was spent at the third of our meetings in listening to actual descriptions of what is going on in the various schools. Indiana University's program was presented and also that on which Purdue is working. The group spent some time discussing an integrated social studies course which combines government, history and sociology. Goshen College and Manchester are planning to experiment with highly integrated programs. Goshen is considering an interesting plan of assigning a student to a faculty or local family to study a child for four years.

There was some discussion also of September experiences and where they fit into the total teacher training program. Most of the schools assign student teachers to schools not permitting choice of location by the student.

There was some discussion of the state's requirement for supervising teachers. A ruling has been passed requiring a Master's Degree for supervising teachers and also five years

of experience. A revision of that ruling permits the use of temporary supervising teachers for a three year period while the teacher is encouraged to extend his training and experience to meet the state requirements. These temporary approvals are not renewable. There was some discussion also of the differences in the fees paid to the supervising teachers by the various institutions. A number of the people present felt that perhaps the wisest way to handle the problem would be to provide no special payment to supervisors but gradually to make the training of teachers a matter for honor and recognition rather than monetary payment, since the difference in payment by various institutions raise serious problems.

The group appears in agreement that opportunity should be provided for the study of the social foundations of modern education. This is provided in different ways in the schools of the state and at different levels.

Some discussion centered about the selection of areas of subject matter concentration in the elementary school program. The problem includes not only the concentration for the undergraduate program but also the building of background to meet the requirements of prerequisites for graduate courses in the fifth year.

Some time was spent at each session in discussing the programs provided at a variety of types and sizes of institutions. All of the schools represented appear to be in the process of evaluating their programs for

the purpose of strengthening them and also for the purpose of profiting by the increased flexibility permitted by the State Commission. Experimental programs are being devised and in some cases are in the process of trial.

The group wished to go record as encouraging the institutions to extend their search for qualified teachers and to carry on research, either as individual institutions or as a group, to determine what qualifications—academic and non-academic—should be set for the selection of such supervising teachers.

They also agree to go on record as favoring some attention to the social and philosophical foundations of education at the undergraduate level. In this matter they tend to disagree with the Armstrong report. There was agreement that the foundations can be handled in various ways—a separate course or as a part of other education courses—but it should appear in the undergraduate program to the extent that students have a foundation for understanding the modern school. We are committed to the idea of an educated teacher rather than a trained teacher.

Research is needed not only in the large universities but also in the smaller colleges to develop and evaluate methods of meeting the needs of society for better educated teachers.

GROUP RECORDER: *Dr. Ruth Strickland, Indiana University*

Group IV

Teacher Education: Whose Responsibility?

Discussion Leader: Mr. Lewis W. Gilfoy, Indianapolis Public Schools

Group IV first turned its attention to the question of the responsibility of Teachers, School Administrators, Professional Education and Profes-

sional Academic groups in the preparation of teachers. It was recognized that several professional academic groups were already studying this area of concern. Two groups appeared to be making progress—Mathematics and English.

Dr. Edwards of Ball State described the organization and work of the Indiana School and College Committee on Mathematics:

This group is composed of representatives of the Mathematics departments of Indiana Colleges and an equal number of teachers in the public schools including representatives of the Indiana Council of Teachers of Mathematics, representatives

from the Principals and Superintendents Association and others.

The committee is interested in the curricula in Mathematics at all levels from grade one through college and in the preparation of teachers.

The first objective of the committee is to determine actual practices as they exist, to determine weaknesses in the preparation of teachers and to revise courses or develop new courses where necessary to improve the preparation of teachers of mathematics.

It is the expressed hope of the committee that "In Service Institutes" may be held to improve the training of teachers now in service. Improvement of the curriculum in the public schools is possible only when adequately trained teachers are available.

It was reported that some progress of a similar sort is being made through the common efforts of the four state colleges and universities. Some of the efforts of the faculties in Mathematics and English were thought to be "Sputnik" motivated, but in general the thinking and development of the programs represented an effort of several years.

It was recognized as fortunate and commendable that these improvements in Mathematics and English were coming about as the result of self-stimulation, concern and criticism and not as an imposition from the outside. The practice of bringing together persons at all school levels to solve problems of improvement, was recognized as being superior to possible improvement as the result of recourse to the state legislature.

One of the most unfortunate bars to progress in teacher education was thought to be the lack of interest of many teachers (college as well as secondary and elementary) in their professional organizations. Symptomatic of this was the reported fact that last year only one-half of the Chairmen of the Departments of English in the colleges in the country even belonged to their professional academic organizations.

Workshop Registrants

Clifford Adams, Professor of Geology, Hanover College
 Ralph M. Albaugh, Asst. Professor of English, Indiana State Teachers College
 Jennie E. Andrews, Professor of Education, Taylor University
 Howard A. Book, Director of Teacher Education, Manchester College
 Wenonah G. Brewer, Professor of Education, Asst. Director of Secondary Student Teaching, Indiana State Teachers College
 Dorothy S. Bucks, Professor of English, Hanover College
 Lucile Clifton, Professor of English, Ball State Teachers College
 Desmond L. Cook, Assistant Professor of Educational Psychology, Purdue University
 Raymond Cowan, Associate Professor of Physics, Franklin College
 Richard A. DeGraff, Instruction, St. Mary's College
 P. D. Edwards, Professor of Mathematics, Ball State Teachers College
 Leland H. Erickson, Head, Department of Education, Franklin College
 Robert H. Farber, Dean, DePauw University
 Mary Finke, Registrar, John Herron Art School
 Ann M. Fisher, Associate Professor, Hanover College
 Rosemary Fisher, Professor of Physical Education, Ball State Teachers College
 William M. Fuson, Professor of Sociology, Earlham College
 Harold M. Garriott, Assistant Professor of English, DePauw University
 Shelby D. Gerking, Associate Professor of Zoology, Indiana University
 Lewis W. Gilfoy, Supervisor of Secondary Education, Indianapolis Public Schools
 Vera M. Good, Assistant Professor, Goshen College
 Clinton C. Green, Head, Education Department, DePauw University
 E. Glenn Griffin, Assistant Professor of English, Purdue University
 Herbert L. Heller, Associate Professor of Education, DePauw University
 Charles A. Henzie, Director of Student Teaching, Jordan College of Music, Butler University
 Eugene L. Herbst, Assistant Professor of Chemistry, Indiana State Teachers College
 Muriel P. Holland, Instructor in Elementary Education, DePauw University
 Robert E. Hoskinson, Assistant Professor of Business, Indiana State Teachers College
 William L. Howard, Professor of Education, Butler University
 Earl A. Johnson, Head, Department of Education, Ball State Teachers College
 Robert Kent, Associate Professor of Biology, Indiana Central College
 Curtis D. Kirlin, Professor of Education, Franklin College
 B. J. Kohlbrener, Professor of Education, Notre Dame University
 Kraft, Milton E., Professor of Education, Earlham College
 R. M. Kutz, Professor of Education, Hanover College
 R. G. Lantz, General Supervisor, Student Teaching, Indiana State Teachers College
 Victor B. Lawhead, Assistant Dean of Instruction, Ball State Teachers College
 Clayton G. Lawrence, Director of Teacher Education and Director of Student Teaching, Marion College
 Rev. E. Lucas, CPPS, Chairman, Division of Education, St. Joseph's College
 Leslie J. Mauth, Associate Professor of Education, Ball State Teachers College
 H. B. Menaugh, Chairman, Department of Speech, Franklin College
 Russel S. Merkel, Education Department Chairman, Indiana Central College
 Perry J. Miller, Acting Director of Teacher Education, Goshen College
 Paul E. Million, Jr., Assistant Professor of History, Purdue University
 F. H. Mitchell, Director of Teacher Training, Wabash College
 Charles K. Moore, Assistant Professor of Education, DePauw University
 Dale Morehead, President, Indiana Classroom Teachers Association
 Thora Moulton, Associate Professor (German), Valparaiso, Indiana
 Mary K. Nalziger, Associate Professor of Education, Goshen College
 Nygaard, Joseph M., Associate Professor of Education, Butler University
 Robert L. Pabst, Director, Teacher Training & Licensing, State of Indiana
 D. H. Patterson, Assistant to Dean, School of Science, Education & Humanities, Purdue University

Philip Peak, Assistant Dean of Education, Indiana University
 G. Warren Phillips, Superintendent of Schools, Valparaiso Public Schools
 Borden R. Purcell, Director of Professional Relations, Indiana State Teachers Association
 Henry H. H. Remak, Associate Professor of German, Indiana University
 Vern Rempel, Administrative Assistant, Division of Education, Purdue University
 Mary Royer, Professor of Education, Goshen College
 Ruth J. Runke, Professor of Education, Indiana State Teachers College
 Richard F. Scharf, Associate Professor, St. Joseph's College
 Lester F. Schmidt, Assistant Professor of Social Studies, Ball State Teachers College
 Virgil E. Schooler, Director of Student Teaching Secondary Schools, Indiana University
 Dana B. Schwanholt, Chairman, Department of Education, Valparaiso University
 Donald M. Sharpe, Director, Secondary Professional Laboratory Experiences, Indiana State Teachers College
 W. W. Shearer, Chairman, Division of Social Sciences, Wabash College
 Rev. Robert P. Sheehan, CSI, Associate Professor of Biology, University of Notre Dame
 E. Harold Shigley, Professor of Education, Marion College
 Otto J. Shipka, General Supervisor, Student Teaching, Indiana State Teachers College
 Fredericka Short, Director, General Education, Anderson College
 Sister Mary Amatora, OFS, Professor of Psychology, St. Francis College
 Sister M. Clara Ann, Academic Dean, St. Francis College
 Sister M. Fridian, Head, Department of Education, St. Francis College
 Sister Mary Giles, OFS, Director of Student Teaching, Marian College
 Sister M. Margaret Rita, CSC, Director of Admissions, St. Mary's College
 Sister M. Margaretta, CSC, Instructor, St. Mary's College
 Sister Mary Olivia, OFS, Dean, Marian College
 Paul R. Stewart, Associate Professor of English, Butler University
 Ruth G. Strickland, Professor, Indiana University
 Robert W. Strickler, Associate Professor of Education, University of Notre Dame
 Robert M. Swanson, Coordinator of Departmental Services, Ball State Teachers College
 Edgar M. Tanruther, Director, Elementary Professional Laboratory Experiences, Indiana State Teachers College
 Earl M. Tapley, Professor of Education, Evansville College
 Byron L. Westfall, Professor of Education, Indiana State Teachers College
 Paton Yoder, Chairman, Division of Social Science, Taylor University

The group agreed that careful study would reveal that due to the nature of our current national life, almost all people who graduate from colleges and universities may eventually teach in some fashion during the ordinary course of their life activities. This is especially true of "in-service" type training of the military organizations as well as in industry, business, government, commerce, and various types of social services. University departments sometimes have seminars in "teaching" for their beginning instructors. This indicates a growing recognition of the idea that teaching involves (at all levels) something more than acquaintance with subject matter.

The group next turned to the topic "Teacher Education:—An All University Function."

"The 'explosion of knowledge' so ably pictured by President Emens as a product of the past few decades was illustrated by an able (but brief) description of the recent explosive development in the entire area of Mathematics. No subject in the curriculum of any school at any level has not been affected by explosion. This fact demands that the teachers at all levels be in communication with one another and work cooperatively in bringing about satisfactory adaptations of subject matter and suggest new ways of helping pupils and students learn

or accommodate to the ever-changing fields of human knowledge.

These new demands on the teaching profession require that "teacher preparation" be developed as a *partnership* or joint responsibility of the public schools and their patrons with the colleges and universities. European universities have long been concerned with their "Akademische Nachwuchs" — so now must the schools of all types and levels assume in a new way this responsibility for their own continuation in the United States. This idea—though not a new one—raises many questions for all concerned. Should the school corporation accept financial and professional responsibility for critic teachers and the student teaching programs? Should the state assume these costs and responsibilities? Can the colleges and universities properly continue to control and support all student teaching? The role of the ISTA in these and other matters was briefly examined.

The inability of the State Department of Public Instruction to provide educational leadership (especially in terms of curriculum, etc.) was noted. The State Department is an ever-changing politically oriented and controlled organization. It was felt that in its present constitutional form, the State Department could never offer the continuing insightful, professionally mature leadership sorely needed in these times.

There was considerable discussion of ways and means for the improvement of teacher preparation and the solution of other school problems within the framework of the present-day constitutional organization. There was considerable analysis of the possible functions of a "Commissioner of Education"—which revealed rather diverse points of view.

Commendations and Recommendations of Group IV

- I. Group IV wishes to go on record as commending the purpose of the Indiana School and College

Committee on Mathematics, and expresses the hope that other academic fields make similar efforts through their organizations to improve training in their respective fields.

- II. The strength of American education depends in a large measure upon the ability of persons teaching at all levels to work cooperatively in the preparation of teachers in terms of curricular content, improvement of instruction, and research in teaching. Therefore we recommend that the various academic departments of the colleges and universities of Indiana join with the teachers at all levels to work toward these objectives in and through their professional organizations. We urge that all professional organizations (i.e. The Academy of Political and Social Science, the Indiana Academy of Science and others) make the attainment of the objectives prominent in the thinking and activities of all their members and their colleagues.

This implies the need for professional leadership (of a non-political nature) at the state level for purposes of coordination of

study, dissemination of information, and the building of steps for concerted action.

We recommend that a copy of these recommendations be forwarded to all professionally concerned organizations in the State of Indiana.

- III. We commend the efforts of school administrators for their continuing influence on the members of the teaching profession in sensing their responsibilities for teacher preparation.

GROUP RECORDER: *Dr. Milton Kraft,
Earlham College*

Introduction of Foreign Languages (Cont. fr. p. 29)

year in Spanish. We all know our names in Spanish and we have Spanish three times a week for thirty minutes. When we are in Spanish we try to speak as much of it as we can. So we all hope we can have Spanish next year because we all like it.

Joe Taylor

May 22, 1959

Dear Mr. President,

I think you should have the Spanish class in which the sixth grade took part in this year, again next year to help us learn more. It helped us in a lot of ways this year and this is one, it helped us when our regular class was studying Spain. We also enjoy having the parties in which we speak Spanish. We want to thank Miss Gwin for taking her time and teaching us. I myself think that you should have the class again for the benefit of others to learn what we have.

Very truly yours,
Rickey Cannon

Dear President Holmstedt,

I enjoyed Spanish this year. We played games and gave plays to the class in Spanish. We learned many songs in Spanish. Next year we hope to go uptown to a cafe, and talk in Spanish so no one will understand us. We hope to have a lot of fun. Miss Gwin is a very nice teacher. We would like very much to have Spanish next year, I especially.

Sincerely,
Barbara Woods
"Juanita in Spanish."

